A

TREATISE

ON THE

ART OF PAINTING,

AND THE

COMPOSITION OF COLOURS,

CONTAINING

INSTRUCTIONS

FOR ALL THE

VARIOUS PROCESSES OF PAINTING.

TOGETHER WITH OBSERVATIONS UPON THE QUALITIES AND INGREDIENTS OF COLOURS.

TRANSLATED FROM THE FRENCH

OF

M. CONSTANT DE MASSOUL.

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ERRATA.

Page 48, line 3—*puod* read *pond.*
Page 64, line 3—*of a stucco* read *of stucco.*
Page 65, line 9—*Athens* read *Achaia.*
Page 75, line 15—*nons* read *non.*
Page 89, line 9—*makes* read *make.*
Page 112, line 2—*fruits* read *fruit.*
Page 114, line 16—*party* read *person.*
Page 115, line 16—*these* read *those.*
Page 141, line 2—*Japon* read *Japan.*
Page 149, line 7—*Calcs* read *Calces.*
Page 164, line 11—*reen* read *green.*
Page 168, line 17—*bining* read *shining.*
Page 178, line 22—*who* read *which.*
Page 196, line 3—*the European* read *Europa.*
Page 196, line 14—*Curuse* read *Ceruse.*
Page 210, line 18—*of* read *or.*

INTRODUCTION.

THE Arts arose from a natural desire of adding to our enjoyments. Man felt at an early period, that he was not born to grovel upon the earth like other animals! His faculties tended of themselves progressively to develop — he became roused— he studied Nature! A thousand secret springs, a thousand happy combinations presented themselves to his view, and prodigies without number burst forth at every step. He soon discovered that he could attain to a higher degree of perfection: experience was consulted— enlightened by her, he gradually advanced to the desired point; it unfolded and gave more action to his movement, more ease and dignity to his port, more energy and

lightness to his carriage, more delicacy to his form, more regularity to his features, more sprightliness to his natural graces; more sentiment and fire sparkled in his eyes, in his manners more charms and vivacity.

Music and Poetry became the interpreters of his sentiments — sometimes they softly sighed forth his lamentations and desires; sometimes vented his anger in rude menaces and dreadful sounds, in measures brisk and interrupted. His joy and gratitude shone forth in rapid, and at the same time, graceful accents.

At the sound of his voice, Nature appeared to reproduce, and acquire a new fecundity. His chisel gave, as it were, animation to marble; the canvass became animated under his pencil—all appeared to breathe, to move, to act. Distance of time and place, nay, even death itself

itself can no longer separate friends—the hand of the Painter will be able to reunite them. Striking resemblances will be offered to the deceived eye, and make nearly the same impression upon the mind with the objects themselves; all will be imitated and embellished! Here a chearful and enchanting country excites pleasing and joyful emotions—there a deep shade inviting a soft melancholy—here Mars appears in all his fury, inundating the plain with blood and carnage—there Pomona and Bacchus are granting the wishes of mankind, and filling their baskets with luxuriant fruits.

History itself becomes tributary to Painting; Hercules, Theseus, Alexander, Cæsar, &c. re-appear upon the scene; at the representation of their exploits, the emulation of great minds is inflamed; the fire, which forms and sustains the Hero, is rekindled and nourished.

Thus the fine Arts are not only the delight of polished Nations, but a tie which approaches and unites them.—Happy and flourishing in proportion to their taste, they make their luxury and riches serve to multiply their enjoyments, and to augment the brightness of their splendor. England is distinguished among those that are civilized, for the honorable reception she has given to celebrated Artists. The high prices she fixes upon their performances stimulates their emulation; the generosity, the flattering distinctions lavished upon them, will record to all ages, her liberality and the greatness of her views.

The taste shewn by the English Nation for Painting, makes us flatter ourselves, that this Treatise will be received with pleasure. We have the more reason to hope for this, as we have delayed offering it to the public, till we had made repeated

ed experiments on the several subjects on which we mean to treat.

THIS WORK CONTAINS;

1st—Reflexions upon the utility and pleasures of Painting.

2dly—The proceedings necessary to practise with success, all the different styles of Painting.

3dly—Remarks upon the distinguished performances of the first Painters of Landscapes.

4thly—Details upon the nature, qualities, and composition of the colours, proper for the different methods of painting; upon the chymical operations they must undergo; and, lastly, upon the method of using them.

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A

TREATISE

ON

PAINTING AND COLOURS.

On PAINTING.

PAINTING is the Art of imitating all objects in Nature: it places them in a fictitious horizon, whose imitation upon a plane, is no less surprising than that of the subjects it represents. To produce any desired effect, lines are delineated with the most exact proportion; they express the contours of all bodies, and this part belongs more particularly to Drawing—

the Painter afterwards covers the lines, and embellishes them with colours combined with judgment and ingenuity.

Researches after the origin, progress, and revolutions of Painting, would only tend to embarrass, and present to us innumerable difficulties; if the Ancients have treated this subject, their writings are lost—all that we can learn concerning it, is, that Egypt, which has not produced any *chef-d'œuvre* in this way, gave birth to Painting; from Egypt it passed into Greece, where it attained to the highest point of perfection; from thence it passed to the Romans, without however producing any Artists of the first order. It declined with the Roman Empire, and again appeared with splendor under the pontificates of Julius II. and Leo X. It is from this epoch, that a distinction has been made between *ancient* and *modern* Painting.

Nature, who by the means of light and shade, brings forward, or makes her objects recede, was probably the first mistress that taught men to gratify their taste by imitation, and must have been, without doubt, the true origin of Painting.

It was so highly esteemed by the Greeks, as to hold the first rank among the fine Arts. It does not even yield to Poetry, which is styled, *Painting in words*, as we may also style Painting, *mute Poetry*. In like manner as Poetry, so does Painting express both the facts of history and the inventions of imagination; it imitates all objects in nature—it displays to our deluded eyes, the splendor of light, and all the various gradations of shade. Through its medium we distinguish eminences and depths, and it seems to place objects even within our reach, or at a considerable distance, according as the subject may require. Like optics, it makes use of all

that

that can deceive the eye, and, varying its sites, it pleases itself in representing the same object under a thousand various forms. It even produces effects to which Sculpture can never attain: it represents water, air, and fire—the rays of the sun—the soft light of the moon, and stars—thunder, lightning—the rising and setting sun—clouds, twilight, and night! It paints the different movements of our soul, the conceptions of our mind, and almost speaks itself. By help of certain dimensions and measures, we are made to see objects that rival even Nature, and by embellishing, sometimes surpass it! Birds so deceived as to rush upon the grapes drawn by the pencil of Zeuxis; the hand of this one endeavouring to raise the curtain painted by Paressasius; the ingenious miracles from the pencil of Apelles, and so many celebrated men who have

excelled in this art, are they not sufficient proofs?

Painting, by the pleasure it conveys to our mind, through the medium of sight, strikes the soul by the help of the senses, and is perhaps the surest means to attach it. It makes us leap the intervals of time and place, to present to our sight those objects, from which we are separated either by distance or death. It affects us by the novelty, the variety and the choice of its subjects: its charms strike and arrest the attention of all—Artists and Amateurs cannot pass with indifference a fine picture: the emotion which it excites, fixes them to the spot, in order to prolong their admiration.

Painting has advantages which the objects it imitates, are far from being able to procure us. We would not dare look, we should only see with horror, monsters, massacres, men dead or dying—here we contemplate

template them with security; we even survey them with pleasure, when imitated in the works of Painters: the more perfect the production, the more eagerly we examine—we are only affected according as we wish, and our grief disappears with the Picture; instead of which, had we witnessed the real objects, we could neither have commanded our vivacity or our feelings.

The Painter in his works, leaves more for the understanding, judgment, and feeling, than for the sight, and one may almost say, his genius surpasses the Art itself.

But, if Painting has so many attractions for those who simply confine themselves to the admiration of it, how infinitely superior must be the satisfaction of those, who cultivate this fascinating art? How great must be the pleasure of a Lady who observes from the touches of her pencil,

the

the faithful likeness of a much esteemed friend? With what delight will she not behold a flower blooming from her hand: What relaxation more innocent and pleasing, than to form around one, an horizon composed of all that can charm the heart and eyes; to create, one may almost say, objects that the imagination has been picturing to itself; to be able, in short, to imitate nature in her most pleasing forms.

From hence arises the pleasure that Painting has given to all men—hence the commendable custom, among all nations, of making Drawing and Painting constitute a part of education—from hence the particular patronage given by Sovereigns to Painters, and all those who may have made discoveries relative to the progress of this Art.

The different manners of Painting, now in use, are: *Painting in Oil, in Enamel,*

Eludo-

Elndoric, and *Mosaic*; *Painting in Fresco*, *à la Gouache*, *in Miniature*, *in Water Colours*, and *in Crayons*. We shall treat of all these kinds of Painting, and dwell longer on those in general use.

Our intention is not to give a minute detail of the various means, that may guide Amateurs to that perfection, to which few Artists arrive, and which can only be attained by long and laborious study. We flatter ourselves, notwithstanding, that in the details we shall offer, will be found all the principles and proceedings necessary to develop natural genius, and enable Amateurs to acquire a pleasing manner of Painting. We have the more reason to expect it, as it is not to our own particular knowledge only, that we have referred: we have consulted, for each peculiar style of Painting, Artists of the first abilities, and equally animated with ourselves in the desire of being useful to the public.

M. Danloux

M. Danloux has given us his observations on *Oil Painting*: this Artist is well known by his performances, and among others, by his portrait of the Bishop of St. Pol de Léon, the Print of which is now offered to the public, and in which he has expressed, in a manner as natural as energetic, the generosity of the English Nation, the charity of the Prelate, and the gratitude of the French Clergy.

Mr. Arlaud, well versed in *Painting Eludoric*, *Enamel*, and *Miniature*, which he has practised for several years, with as much success as celebrity, has also given us very considerable information upon these three different processes of Painting.

For painting *Landscapes in Oil* and *Drawings à la Gouache*, we have particularly consulted Mr. Belanger, Painter to his Royal Highness Monsieur, brother to Louis XVIII. King of France. The talents of this Artist are known by many

many beautiful Landscapes that adorn the Cabinets of their Royal Highnesses the Prince of Wales, and the Duchess of York; by the Views in the island of Jamaica, those of Richmond and Windsor Castle, which are placed in our Gallery, and by many other works much esteemed by Connoisseurs.

GENERAL

GENERAL IDEAS

Upon the Manner of

PAINTING IN OIL.

PAINTING in Oil is of all styles of Painting the most ancient, and with great reason, has been the most cultivated. It has the peculiar advantage of resisting the injuries of time, and of preserving itself many ages, in all its primitive vigour and harmony.

Drawing is so essentially necessary for a Painter, that it is unnecessary to attempt proving its utility. We shall content ourselves with observing, that those persons who wish to apply to Painting, should not only copy Drawings of good Masters, but also the antique figures. They should also draw from recollection; in doing this, they will find great advantage.

They should always have with them a book, to contain slight sketches of the present ideas, and to seize those happy effects so often seen in observing Nature. It is likewise advisable to make slight sketches of Pictures and Prints, that may have impressed them. It is thus the mind is furnished, and the hand accustomed to practice, without which, the most perfect theory would be reduced to the most insignificant inability.

The most easy method of proceeding, either in Drawing or Painting, is to begin with the great forms and masses, and to imagine one's self in haste, in order to express with few strokes, the general idea of the subject we wish to represent. It is easy to conceive, that being employed at the beginning with the detail, you will naturally fall into the minutiæ, and perhaps never attain your end. It would be like an Architect, who should distribute the

apartments

apartments of an Edifice, before he had traced the general plan.

When the largest and principal masses are drawn, which can only be done from having well examined the object you are representing, then follow the more inconsiderable parts, and so on insensibly to the smallest details, which will then give but little trouble. These principles may be applied to every species of Painting, and indeed, one may say, to the Arts in general.

Having proceeded so far as to begin to colour, you should make choice of those materials that are the most perfect, and the best prepared, if you wish to preserve, for any considerable time, your performance. Those most generally used in Oil Painting, are the following:

White Lead	Blue Black
Yellow Ochre	Red Ochre
Burnt Sienna	Red Lake

Raw

Raw Sienna	Deep Red Lake
Prussian Blue	Chinese Vermilion
Indian Red	Naples Yellow
Brown Pink	Vandyke Brown
Yellow Lake	Ultramarine
Ivory Black	

This last colour ought to be used with precaution, not only on account of its bearing a high price, but, without instruction, being difficult to use.

The colours ought to be ground with fine nut or linseed oil, or very transparent poppy oil.

If you wish your Picture to dry quick, make use of *drying oil*. If you have no *drying oil*, mix with the point of your knife a little *Saccharum Saturni* with either of the foregoing oils.

Drying oil is seldom used, but with Browns and Lakes, these colours being long in drying.

There

There is a distinction between *transparent* and *opake* colours; the former are these:

Red Lake	Vandyke Brown
Yellow Lake	Prussian Blue
Ultramarine	Siennas

The colours should never be laid on the canvass, till the outline is drawn perfectly correct: otherwise, there would be at once two difficulties to conquer, one of *Drawing*, and the other of *Painting*.

When the Pallet is prepared, and the subject traced, compound your tints; this is done by taking with the point of your pallet-knife, from among the principal colours, those which are necessary for the object you mean to represent.

For example, a little White, Brown, Red and Vermilion, mixed together, will compose a flesh-colour.

Blue Black, Vermilion and White will make a middle tint for flesh.

Ivory Black, Indian Red and Naples Yellow, will do for the shadows.

As it would be impossible to give exact directions for the composing every tint, it must be understood by the three above-mentioned examples, that they may be made lighter or darker, more or less vivid, in proportion as you add lighter, darker, or warmer colours; that is to say, if Yellow and Blue form a Green, it can with ease be made more or less Green, partaking of the Blue or Yellow, as more or less of these colours are mixed with it: and it will be lighter or darker, by mixing with it White or Black, &c. in like manner with other colours.

Having covered the canvass with proper colours, and disposed the principal tints near each other, in order that they may insensibly accord, a soft pencil should

be

be used, the hairs of which must be separated so, as not to form a point; it should then be lightly passed, without colour, over the Painting, and care be taken to use it in the same direction with the forms of the objects previously painted, in order to blend the tints one with the other, and to make the hard outlines disappear; for, in Nature none are discerned.

When the whole is softened, then the strong touches should be given, either light or dark, in those parts that are to project or recede. These touches should not, however, be given, till the forms that may have been obliterated or misplaced in softening with the dry Pencil, are retouched; which frequently happens to persons unaccustomed to use one.

You should, as much as possible, finish the Lights, so as to have little to retouch. In general the shadows may be left lighter,

as it is very possible they may be rendered more vigorous by *glazing**.

Many Painters, both in Glazing and in Painting, make use of varnish mixed with *fat oil*, because then the Picture appears brilliant, and not *imbibed*†.

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* *Glazing*, a term in Painting, is the using transparent colours mixed with a little drying oil, which with a firm pencil, is passed over those parts that are to be warmer and more forcible.

Draperies are likewise *glazed*, and in general all objects that require a more brilliant tone. For example, would you paint a bright Red, you must begin by painting a very brilliant and light Yellow; after it is dry, glaze it with fine Lake. This indication is sufficient to give a general idea of *glazing*, and the advantage an intelligent person may derive from it.

† *Imbibed*, is a term in Painting: it is the effect that oil produces upon a canvass, that has not been long painted. It soaks into those colours that are underneath, and causes the upper ones to appear sunk. But white of egg, or varnish, makes them come out, and appear as when first painted.

This

This method, so pleasing, and therefore so seducing in practice, may, without doubt, be useful; but then it ought to be used with precaution. To this may be attributed the change that the Pictures of the celebrated Sir Joshua Reynolds have undergone. Spirits of turpentine, the basis of varnish, corrodes the colours, particularly those drawn from Vegetables—such as Lakes. You have the more to dread, as Pictures being varnished only in some particular places, they may crack in all those parts, where there is an union of colours with varnish, and those simply with oil.

It would be prudent to wait a considerable time, until the Picture is perfectly dry. It should then be laid flat, and one or two coats of varnish passed over it, quickly and lightly.

When the Picture is thoroughly dry, instead of varnish, white of egg well beaten with

with a little sugar-candy, a little garlic, and a tea-spoonful of brandy, may be used. Then, with a sponge well washed, take the lightest froth of the egg, and pass it lightly once over the Picture. By means of the sugar-candy, the cracks are prevented; and the garlic prevents the flies from soiling the Picture.

PARTICULAR INDICATIONS

For the Method of Painting

Landscapes in Oil.

IN order to paint Landscapes in Oil, you must begin by drawing your subject with white chalk, upon a canvass, well prepared and very dry. When the outline is finished, retrace it with drying oil and burnt Terra de Sienna. Afterwards sketch it in the most transparent manner possible, and avoid a thickness of colour.

The

The Sky, in general, is begun with White and Prussian Blue.

The gilded clouds, with Naples Yellow, White, and a very little Yellow Ochre.

The colour of the Mountains, participating with that of the Sky, the tint of the latter should be repeated; but make Prussian Blue predominate, adding to it a little Lake.

To express the reflection of the sun upon the Mountains, take of the tint prepared for the gilded clouds, adding to it a little Naples Yellow; in order to make it a little greener, mix with it a little Yellow Ochre.

For the parts that approach the horizon, Naples Yellow only must be used. The fore-grounds should be painted without White; it is unnecessary in the shadows.

Grey tints are composed of Naples Yellow, Lake, and Blue Black. With these three

three colours, the most beautiful greys are produced.

The trees are sketched in, with tints made of Brown Pink, Umber, and Prussian Blue.

Rocks should, in general, be treated in the same manner, suppressing only the Prussian Blue.

The foliage is done with Blue, Yellow, and Red Ochre, mixed according as you would give them a more or less brilliant tone.

To make the Greens more luminous, you may use Dutch Pink, and sometimes Orpiments; make them dry by means of *Saccharum Saturni.*

The colours most generally used for Landscapes in Oil, are the following:

White Lead	Indigo
Naples Yellow	Dutch Pink
Crocus Martis	Yellow Orpiment

Brown

Brown Pink	Cologn Earth
Prussian Blue	Blue Black
Yellow Ochre	Brown Red
Brown Ochre	Indian Red
Burnt Sienna	Lake
Raw Sienna	Red Orpiment
Green Earth	Ivory Black

In Landscapes, as in every other Style of Painting, there are innumerable difficulties to surmount; and to imitate Nature with correctness, requires infinite study, labour, and pains. A Landscape-Painter must not only unite taste, drawing, and colouring, but must also attend to the general disposition of his Picture. It is not enough that in a Landscape, each object, taken separately, be painted with force, and like Nature; there ought to be proportion and harmony throughout the whole, and each separate part set off by the other.

All who wish to make a progress in this Style of Painting, cannot devote too much time to Drawing—it is the soul of the Art. Most young people are apt not to feel sufficiently this truth, and would always begin where they should end. It is advisable to begin by studying and copying the Drawings of the ancient Masters. We will point out some of those they may consult, of which they cannot too much admire the correctness, precision, and harmony.

Claude Lorrain, for the beauty and harmony of his colouring, may be considered as a Pupil of Nature.

Le Vinance is not less admired for the truth that reigns in all his works—Even the most simple and barren objects please the eye of the observer; the trunks of trees, the fore-grounds, every thing in his Pictures breathe fire and genius.

The

The taste and delicate touch of Moucheron's trees, the perfect harmony in all his Landscapes, entitle him to rank among the first Masters.

The incomparable Ruisdale may be regarded as a Model for Artists, on account of his manner of painting clouds, the effects of sunshine, the depth of the forests, cottages, windmills, transparent and limpid waters. The drops that fall from his water-mills, appear as so many crystals, and form the most pleasing contrast.

We admire, not without reason, in the works of the celebrated Berghem, the setting sun, the groups of cattle, quenching their thirst in the clear stream, &c. In his Pictures all Nature appears animated; the harmony and disposition of the whole leave you nothing more to desire.

We should never end, were we to mention all the celebrated Artists who may be looked up to as Models. We will, however,

name Gouaspe, Poussin, Waterloo, Dujardin, Paul Potter, and Salvator, who for their method of painting animals, the beauty of their Etchings, and the truth of their Drawings, deserve particular attention. The boldness with which the latter draws the branches of his trees; the variety of his points of view, and the grandeur that reigns throughout the whole, cannot fail of heating the imagination and of displaying genius. His Engravings of figures may be considered as excellent models.

We do not see in the works of the above-mentioned Artists, as in those of some moderns (who have been too much led away with a false taste for composition), that stiffness, one may say, that false taste, sufficient to destroy the beauties that may be found in their Pictures. It is because the former were always studying Nature, whom they took for their only

only guide, and of which they imitated the proportion, order and simplicity.

It is not, however, advisable entirely to neglect composition: after having copied for some time the Drawings of great Masters, and made a serious and careful study of every object which Nature and Art present to us, you may then attempt composition. The mind being thus well stored with a variety of objects, you will be enabled to represent them with force, and produce both beautiful and interesting subjects.

However necessary it may be to consult the best Masters, as from them in a short time you reap the labour of many years, they should not be copied too long, for fear of not acquiring a manner of your own. Having well understood and studied their beauties, then let Nature be your only guide.

ELUDORIC PAINTING,

Or, The Method of Painting in MINIATURE WITH OIL COLOURS.

With starch paste, as even as possible, fine cloth or taffety upon small glasses of about two inches square: the angles of them must be smooth, so that the cloth may turn over, and not oblige you to cut the overplus.

When the cloth is perfectly dry, with a knife lay on a coat of White Lead, and the whitest Poppy Oil that can be found. This first coat being sufficiently dry to allow you to scrape it smooth, you must then lay on a second, and afterwards a third priming.

It is very important in this manner of Painting, that the above-mentioned composition be as free from oil as possible, in order that it may imbibe that of the colours,

colours, that are afterwards applied; its surface must be very even, very dry, and very hard. You afterwards take a circle of copper of about twenty lines* in diameter, two or three lines in height, and one line thick, turned upon a right angle, and painted black on the inside. This circle serves to contain upon the surface of the Picture, distilled water, or, if you have it not, rain or snow water.

The colours must be ground between two Agates, with the most scrupulous attention. You must take the greatest care to guard them from the dust, or any thing that might injure them. They are afterwards mixed with Oil of Poppy, or any other drying grain, extracted without fire, and as white as water, if possible.

These colours being ground, they are put in lumps upon a small square glass, kept

* Twelve lines make one inch English.

under distilled water, and enclosed in a tin box fastened with a screw. You must observe never to touch these colours, but with an ivory-knife, either in grinding or mixing them. Avoid also touching them with metal, except some certain colours that are very fat, and cannot undergo much change, such as the Lakes, the Blacks, &c.

The Pallet, which in the whole should not exceed two or three inches, must be made of the wood of the sorb tree well prepared. There should likewise be a glass, fastened to it by hinges, to cover the colours, and preserve them from dust.

Having prepared all the materials, to begin to paint upon one of these canvasses, you must first trace in the middle, the size of the subject, whether bracelet or ring; then, draw the outline very faintly, with black lead pencil. Take from among the colours, that have been placed

under

under water, those necessary to form your tints. Afterwards, let down the glass—then, hold the canvas between your thumb and fore-finger, support it with the middle one, and hold your pencils with the fourth and little finger; rest it against the back of a chair, and in this position you must work. You will by that means, be able to have your Drawing as near, or as far from you, as you may find it convenient, and also to turn it in any direction.

Dust being so great an enemy to Painting, either in large or small, you must avoid the smallest motion that may collect any: the smallest speck that might fix in the corner of an eye in a Portrait, would be sufficient to stop, for a considerable time, an Artist tenacious of the delicate finishing of his pencil. He must therefore use every possible precaution, however minute it may appear, to prevent those atoms of dust from collecting, that are sometimes imperceptible.

When you paint, it is necessary to throw over your thumb a piece of white leather, the outside of which must be very smooth, as it must serve to wipe the pencils and form their points.

To clean the pencils, you must soak them in rectified spirits of turpentine; afterwards, turn them upon the Pallet, and wipe them upon the skin. You should always have at hand, a small phial filled with rectified spirits of turpentine: The common spirits of turpentine is worth nothing, for it contains turpentine that would cause the colours to become yellow.

After having drawn, in the neatest manner possible, your outline, while the colours are yet moist, place horizontally upon the surface of the whole, the copper circle, without however letting it exceed the edge; having fixed the circle, you pour upon the Drawing, about a line of distilled water; you bend forwards a little, in

in order that the sight may fall perpendicularly upon the canvas. You must rest the fourth finger of the right hand, upon the internal angle of the Picture; then go over the sketch with a firm and fine pencil, to strengthen the parts that appear too faint, soften those that are too strong, and thicken the colours.

As soon as the oil floats upon the top, pour off the water, and cover the Picture with a bell glass; put it in a box that is gently heated; when it is sufficiently dry to bear scraping till it is perfectly flat, repeat the above-mentioned operation, till you have compleated your Painting. You will have the advantage of finding, when you have well executed your Picture, that three or four colours suffice, and that there only remain the last touches. It is in the last finishing, that you will find the advantage of this new method, for the high finishing. The colours of the Painting

being mostly dull and imbibed, they are generally brought out by varnish. You must absolutely avoid this, and supply its place by limpid water, which you must pass lightly over the Picture; it gives it all its original effect, discovers the faults of the pencil, and enables you to examine the greatest depth of shade; instead of which, in the usual method, it is always misty and undecided, and after the oil is dry, leaves the Picture hard and rough.

It is thus, that in this style of Painting, water is of the greatest utility; by means of its transparency, you see the effect of the crystal, and you produce the desired effect, by always working through this element. Without the advantage of water, by continually retouching the work, it would be thick and shining, and it would happen that, after having taken great pains and put it under a glass, the effect would be very different to what you before imagined.

However

However capable the Artist may be of drawing his Picture finely, it never will be so much admired, if he does not make choice of colours adapted for this manner of Painting. He must avoid using those, that will dissolve and weaken with moisture, such as the Dutch Pink, &c. He must prefer the Earths, Ochres, &c. and never use any substance till he has first analysed it.

After all these precautions, the Painter may retouch his Picture as freely, and as often as he will; because the water leaves with the colours, only what oil is sufficient to make them adhere to the canvas, and makes the remainder float upon the surface. This Painting not having too much oil, and not admitting of any varnish, you need not apprehend the degradation of the tints.

When the Painting is finished, to intercept the air, it must be immediately covered

vered with a glass. To close it exactly, make use of some corrosive uncoloured susbtance, and do it with a gentle heat. This substance must be composed of simple mucilages, that have no analogy with the materials of the Painting, and contain no salt capable of changing the colours.

PAINTING

PAINTING IN ENAMEL.

OF all the various mediums of Painting, none is more solid or durable, than that of Enamel, since time, which destroys all things, alters neither its beauty nor its brilliancy; one may also say, that there is no method of Painting, that unites in itself so many difficulties in execution.

The process is performed upon metal plates, covered with a coat of White Enamel; gold is frequently used for the plates, but in its stead you may use copper—it succeeds almost as well. These plates should be concave on one side, and convex on the other. They are usually round, or of oval form; if they were flat, there would be great danger, in passing them through the fire, of the Enamel flying. The convexity of these plates must not

not however be too sudden, as it would spoil the effect of the Painting: The sight could not rest upon the whole subject at once; the light necessarily striking upon the most elevated parts, would interrupt the effect by its brilliancy, in whatever light it might be placed.

The White Enamel should not border too much on the Yellow, as the fire contributes, each time, to give it a more Yellow cast; neither should it be of a Blue White, since in painting the Flesh, it would be attended with great inconvenience.

The colours used in Enamel, are all metallic calces, mixed and melted with certain proportions of a vitreous substance, which, in the instant of fusion, discovers the colours and fixes them to the Enamelled Plate. This melted glass in Enamel, produces the same effect, that oils, gums, or glues produce in the other

processes

processes of Painting. It unites the little particles of matter, makes them adhere to the surface of the Enamel, and vitrifies them with itself. When well managed, it gives the colours a polish and brilliancy, that could not be produced without it.

It would be useless here, to enter into a detail of the methods of preparing the colours, as you may procure them very good from the Enamellers, who will prepare the plates, and likewise pass them through the fire, after each Painting. Some Artists have thought it necessary, to do this themselves; but if they have recourse to an intelligent man, they will find that there is no occasion for it.

Many colours are not necessary for Enamel Painting. With those we shall mention, all possible tints may be produced. It was formerly thought indispensably necessary to procure colours, the one harder than the other: The hardest were

used at the beginning, those more tender at the finishing, so that a more moderate heat of the furnace was sufficient; whereas had they frequently been exposed to a great heat, the colours would have disappeared. We think, however, these precautions useless.

Without entering into any detail of the composition of colours, we will mention the metals from which they are extracted:

From Gold you have the Scarlets, Purples, Pinks, and Violets.

From Silver and Antimony, the Yellows.

From Copper, the Greens.

From Cobalt, the Blues.

From Iron, the Deep Reds, Blacks, and Browns.

From Tin, the Whites.

These colours are the basis, or rather the materials of which all those used in Enamel Painting, are composed. The following are what are necessary:

Deep

Deep Purple	Straw-col. Yellow
Rose Purple	Blue
Violet Purple	Green
Deep and warm Yellow	Black
	Dark Brown
Brilliant and light Yellow	White, to give the last touches.

We have mentioned three different Purples, because the deepest is used for the strong touches, and consequently with a thick body of colour, and produces a warm tone. If, on the contrary, it is used faint and thin of colour, the tint is too Violet, and not bordering sufficiently on Pink.

The second, which is called a *Rose Purple*, has a contrary effect; that is to say, if used thick, loses its force, and, if laid on very faintly, gives a most brilliant Rose colour.

It is therefore advisable, after you have purchased these colours, to try the Deep

Purple, by strong touches; and the second, by a light wash, to see whether they correspuod with those tones you wish to produce.

The Violet Purple is more brilliant, when you buy it ready prepared, than when you make it with Blue and Purple.

It is the same with Yellows, which, when used faint, do not produce a tone equally strong and brilliant, as when used thick; at least, this is rarely the case.

The Blue is a very cold colour, and becomes deeper every time it is passed through the fire. It must therefore be used with precaution, and only for the flesh. To make the tint warmer, mix with it a little Yellow.

The Greens, most of which are extracted from copper, are extremely brilliant, but do not stand; they must only be used in the Draperies, Back-grounds, &c. and only when you pass the Picture the last time through the fire. For the flesh,

you

you must make Greens with Blue and Yellow.

As it is difficult to procure Blacks that will stand, you had better sketch those parts that require it, with mixtures of Dark Yellow, Blue, Deep, or Violet Purple. In the last touches, you may use Black.

If you cannot procure Browns that will stand, compose them with the same colours used for the Black, adding more Deep Yellow and Deep Purple.

In order to ascertain the quality of your colours, you must have an enamelled plate, which is called an *Inventory*; on this try your colours, and, after having numbered each stroke, pass it several times through the fire. If you have taken care to lay these more or less strong, and of different thickness, these inequalities will determine on the Inventory, when taken out of the furnace, the faintness or force, the shades and solidity of the colours.

It is thus the Painter in Enamel will arrange his Pallet, which must be a continuation of numbered strokes more or less considerable, upon Inventories, to which he must have recourse, as occasion may require. It is evident, that the more he has of these trials, the more complete will be his Pallet. These essays are composed either of pure and primitive colours, or of those formed by the combination of many others. These last are composed for Enamel, the same as for every other style of Painting; with this difference, that in other methods of Painting, the tints remain the same as when painted; instead of which, in Enamel, the fire changes them in a thousand different effects, and sometimes adds much to their brilliancy. It is therefore necessary that the Artist should have all these different effects present to his memory; without this, he would frequently make one tint for another,

other, and often be unable to regain the one he previously made.

An Enamel-Painter should have, as it were, two Pallets—one near him, the other in his mind. He must endeavour to unite and harmonize all the touches of his pencil; which would be very difficult, and perhaps impossible, if after having begun a Painting, he should for any length of time neglect it: he would no longer remember the manner in which he had formed his different tints, and would, every instant, be liable to place either upon, or near each other, colours that do not accord together.

It is easy by this to judge, when an Enamel Painting is rather large, how difficult it is to make it harmonize. The merit of the Picture may be generally acknowledged; but it is only those initiated in the Art, who can really value the merit of the Artist.

The colours should be reduced to the finest powder, and be afterwards ground with water, with all possible care, each upon separate glasses. They should only be ground in small quantities at a time, because the extreme separation of their particles cause them to change in melting; they will not acquire so brilliant a tone, and frequently will not take any polish. They must be left to dry upon a glass covered with a sheet of paper; after which, the same as for Miniature, they must be inclosed in small phials well corked.

The colours being thus ground with water, procure some Essential Oil of Lavender, which must be fattened, in order that it may not evaporate too quick. For this purpose, pour into a plate a quantity of oil, about a quarter of an inch deep; cover it with a piece of gauze, and expose it to the heat of the sun, until you perceive it flows, and that it only has the fluidity

fluidity of Olive Oil. It takes more or less time to fatten, according to the season. This Oil must be put into a phial perfectly clean, and the operation repeated, till you have a sufficient quantity. If, by keeping it too long, it should fatten too much, mix with it a little Oil that has not been fattened.

You may also employ Oil of Lillies, which you may use as you buy it from the shops. This Oil has this advantage, it does not evaporate, and leaves the Artist the power of judging of the harmony of his work, and the force of his tints; but before you put your Painting into the furnace, expose it to the heat of a charcoal fire, augmenting the heat by degrees, until the Oil is entirely evaporated. If it was put into the furnace immediately after it is painted, the colours would bubble and spread in every direction, by which means the Picture would be totally spoiled.

The Oil of Lavender is not attended with the same inconvenience; it evaporates by itself, aud tolerably quick; but it sometimes happens, that after having finished the upper part of your Painting, and continuing your work next morning, you will find the colours previously painted, dried and imbibed, and you cannot, without having had great practice in this method of Painting, regain the same strength of tones to continue your work. It is only when the plate has been past through the fire, that you can form any judgment of it. You may therefore, at the beginning, use Oil of Lavender; and if you wish to harmonize, darken, or destroy any of the lights, then use Oil of Lillies.

You mix your colour with oil upon a glass, or upon a piece of agate, until you feel it as soft as oil under the muller. You must then arrange them by little heaps, upon another glass that is very even,

and

and place it in a box that you only half open, so that the dust may not enter. Under the glass put a piece of white paper, that you may the better judge of the colour of your tints. In order that the tints may not be soiled, and that one colour may not mix with another, be careful, after every tint you make, to wipe the glass with a fine piece of linen, dipped in spirits of wine.

The simple colours must be arranged on the upper part of the Pallet; the lower part must be reserved for the mixed ones. You must not forget to renew your Pallet every morning: the colours are never so good, when the oil has evaporated and lost its fluidity.

When you have thus arranged your Pallet, you must, with an ivory-knife, take from among the principal colours, those necessary to form your tints in the manner we shall direct. To paint the

flesh, pursue the same plan as will be mentioned in the article of Miniature. We will mention those colours, which in Enamel Painting will produce the same effect.

After having wiped with a fine linen and spirits of wine, the Enamelled Plate on which you mean to paint, you must draw, very faintly, the outline of your Subject, with a Black lead pencil. When the outline is done, pass a white linen upon the whole, to prevent any of the powder of the pencil remaining. Without this, when it is put in the furnace, the little particles of the pencil that have not been taken off, would arise in bubbles, and remain of the tone of those colours you afterwards lay on.

After this operation, make a second and more detailed outline than the first, with Deep Purple. This second outline should be as correct as possible; because when it

has

has once passed through the fire, it is very difficult to efface the most trifling stroke. You may use with advantage, a piece of hard wood pointed like a pencil, with which you may correct your outline, by moving the colour more to the right, or to the left, as you may find it necessary. When you are satisfied with your outline, and have drawn every thing in its proper place, pass it, for the first time, through the fire.

If, after every melting, you perceive that any air-bubbles have arisen, or that any part of the colour remains rough, take a small piece of oil-stone, or a steel point, well steeped; rub on the place (without however going too deep), till you perceive the white of the ground. After this, before you again begin to paint, pass it through the fire, to re-polish the part that has been rubbed.

This second outline being finished, and the

the plate again wiped with a cloth moistened with spirits of wine, begin to paint the strongest shadows with a mixture of Dark Purple, Dark Yellow, and a little Blue: by the means of these three colours, you produce the same warm tone, that is given by the mixture of Burnt Sienna and Indigo. The method of applying the colours, is the same as for Miniature upon Ivory, with this difference, that as oil takes a more considerable time to dry than water, the Artist who paints Enamel has more time to work his colour, after he has lain it on the plate. When you have placed and softened one touch, you must leave it, and wait till it is again passed through the fire; otherwise, the too great quantity of oil that is confined under this second coat of colour, will, in the instant of fusion, make the upper ones bubble, and prevent them from polishing. All the colours, when they come out of the fire,

fire, ought to have nearly the same degree of polish.

To finish painting the middle tints, you must mix Light Red, Purple, and Yellow that is not very dark; add more or less Yellow, as occasion may require. If it is a woman's head you paint, use Rose Purple and Light Yellow. You may with these Red tints, and without any other mixture, work upon the flesh, and pass it through two fires. You must observe, after every fire, to advance the hair, drapery, and back-ground, and cover the whole of the plate.

The back-grounds are painted the same as in Miniature, either in Water or Body Colours. In general, the dark grounds should not be done in hatching: it would be too long and tedious: they should be done with a large pencil, and at once, the same as in Oil Painting. You must not use White in the back grounds—Pale Yellow

Yellow will answer the same purpose, and has sufficient body to cover. The lightest side of the ground is done with Blue, Deep Purple, and Pale Yellow. For the dark side, make use of the same colours, substituting Dark Yellow for the Pale Yellow.

It must be understood, that with these colours you may arrange several degrees of tints upon your Pallet, and paint back grounds of different colours, by adding more or less of those previously mentioned.

The sky back grounds are painted without White, and in a wash, with a mixture of Blue, Yellow, and Purple; at the same time varying the tints, as you may have occasion.

If you wish to represent a brilliant Scarlet Drapery, it is necessary, first to paint it with a very brilliant Yellow; you then pass it through the fire, and repaint it with *Rose* or *Deep* Purple.

When

When the whole of the plate is covered, you begin to paint a second time on the flesh, always observing to begin first with the shadows. For this, make use of Blue and dark Yellow mixed. For the middle tints, use light Yellow mixed with Blue, particularly for the Blue tints in the lights. We again repeat that the Blue must be used with the utmost precaution, as it acquires a deeper tone, every time it is passed through the fire. The Purples being liable to become more Violet in being passed through the fire, it is advisable to use a good deal of Yellow in the carnations.

If you have used too much Green in the dark Shadows of the flesh, you may glaze them with a little Violet. If, on the contrary, they should be too Violet, work a little Green over them. It is in deadening the tones that are too brilliant, with a little Green and Blue, and heightening

those that are too cold, you produce harmony, one of the greatest difficulties in Enamel Painting. To produce this union, it is necessary that the colours, though distinct in the lights, should be little varied in the shadows, and have the effect of being done nearly with the same colour.

Linens and Muslins may be painted with White, the same as in Miniature; but it should not be laid on too thick.

As in Oil Painting you may retouch your Picture, as often as you like, so in like manner you may in Enamel, observing to pass it, each time through the fire.

The last time of passing it through the fire, is to give it general union and harmony, and to give the touches of strength, that should remain firm. It therefore follows, that the heat must not be excessive.

If the colours are good, you need not spare the fire; the Painting will bear being passed through, nine or ten times; but, if repeated oftener, it may change them.

During

During the time of painting, the Picture should be placed in a Box, the bottom of which must be covered with soft wax, so that the plate may remain fixed. If for a moment you quit your work, do not neglect to close the Box.

PAINTING

PAINTING IN MOSAIC.

PAINTING in Mosaic is the art of arranging, upon a ground of a Stucco prepared for this purpose, small pieces of different coloured marbles, so as to imitate Painting.

It appears that Persia gave birth to this art; from thence it passed to the Assyrians, who transmitted it to the Greeks. These last were not long initiated in the art of Mosaic Painting, before the genius of their Artists brought it to great perfection. This style of Painting was then held in great estimation, and composed a part of the fine Arts in which that Nation was so much distinguished.

Hieron, tyrant of Syracuse, ordered a ship to be constructed of an extraordinary size: the decorations were of Mosaic, representing the story of the Iliad.

The

The Romans learnt the Art of Mosaic from the Greeks. Having conquered Greece, they sensibly imbibed a taste for the Arts which were there cultivated, and took a pride in the Statues and Pictures which they found there. After the taking of Corinth, a great number were transported to Rome, by the order of the Consul L. Mummius; the war of Athens being ended, he presented to Philopœmen, as a reward for the services he had rendered to the Romans, the two pieces of Mosaic, by Sosus, an Artist of Pergamo, celebrated as being the first in this line; one represented the remains of a repast carelessly scattered upon the floor; the other, four doves resting on the edge of a bason filled with water.

Pliny fixes the epoch, when the Romans acquired the taste and knowledge of Mosaic, as immediately following the third Punic war. It was then, for the first

time, that a monument of this kind was erected at Rome, in the temple of Jupiter Capitolinus.

At first, they contented themselves by collecting together large pieces of marble, which, by cutting in various forms, composed figures and rude Drawings. In the course of time, luxury and industry taught them to cut the marble in very small fragments, so as to enable them to compose Pictures, which, from the truth of the Drawing, and the gradation and harmony of the colouring, appeared to possess all the advantages and brilliancy of a real Painting.

Among the works of Mosaic, that called *Vermiculatum*, without doubt on account of its being composed of very small pieces, comes very near the perfection of Painting, when combined with judgment and ingenuity.

Mosaic may likewise be done with

 glasses

glasses coloured by fire, this species of Mosaic was invented and much esteemed in Greece. Although both one and the other require the same ability in the Artist, and they both produce the same effect, namely, that of imitating the various objects in nature, nevertheless it is certain, that which is done with small pieces of marble, is the most difficult, as well as the most durable.

The Greeks did not long make use of coloured glasses; they soon returned to marble, not so much from a spirit of luxury and magnificence, but rather that their works might prove more solid and subsist to future ages. The great quantity of variegated marble found in Phrygia and Egypt, was, perhaps, another reason that induced them to lay aside coloured glasses.

Mosaic, in the beginning, was made use of only to ornament temples; but the

Art having made great progress under the Emperor Augustus and his successors, it afterwards served to decorate the chambers or halls of State, of which it often only occupied the centre. The taste for Mosaic, and the decorations of those works depending on it, began sensibly to decline under the Emperor Septimus Severus.

As soon as the Christian Religion had triumphed over Paganism, and when, by the order of the Emperor Constantine, many temples were erected to the honour of the true God, the Mosaic Art contributed to adorn them ; the walls, the cieling, and the pavement of the Basilique of St. Peter, at Rome, were covered with pictures in Mosaic, representing the history of the Old and New Testament. In course of time, the Sovereign Pontiffs vied with each other, in decorating their Churches with Mosaic.

The

The Arts having sensibly degenerated in Italy, and their decline being more sensibly felt in the tenth century, at which time the productions were of a very inferior nature, M. l'Abbé Didier, who was afterwards Pope, under the title of Victor the third, caused a great number of Artists to be sent from Constantinople, and by that means contributed to revive in Italy a taste for Mosaic. From that time, this Art has insensibly arrived to the degree of perfection, which, at this present time, is so much admired.

In the Church of St. Peter at Rome, may be seen some very fine pieces of Mosaic, copied from the pictures of Raphael. There are likewise many fine pieces worthy of admiration, in the Church of the Carthusians at Rome; in the Cathedrals of Pisa and Florence; in the Church of St. Mark at Venice, and in many other Churches in Italy. In the Church of St.

Mark is to be seen the finest remaining pavement of Mosaic.

Among the great number of Artists, who, in the seventeenth century, excelled in this style of Painting, Cavalier Peter-Paul de Christophoris was one of the most celebrated. He carried this Art to so great a degree of perfection, that his works have the appearance of a high finished Picture.

The school of Mosaic which exists at this day at Rome, has produced many works worthy of admiration; for example, the Portrait of the Queen, the wife of the Pretender, in the Basilique of St. John de Latran; that of Cardinal René Imperiali at the Augustines; and the pavement of the magnificent Chapel of Lisbon, made for king John the fifth.

PAINTING

PAINTING IN FRESCO.

PAINTING in Fresco is the using colours prepared with water, upon plaster which must be wet, in order that the colours may penetrate.

As Paintings in Fresco will last no longer than the walls or cielings, upon which they are painted, remain in a good condition, the greatest attention should be paid to have these as solid as possible, and guard against the inconveniences that cracks and crevices might occasion.

These precautions being taken, you must begin as soon as the place on which you are to paint, is covered with fresh plaster. All the parts you intend to do, should be begun and finished the same day. This circumstance, peculiar to Fresco, by taking away from the Painter

all resources of retouching, or making any alteration in his work, renders it absolutely necessary to have, before his eyes, a finished outline, with all the necessary measures and proportions of his subject. It would, otherwise, be very difficult for him to attain that union of composition, which so greatly conduces to the perfection of his work.

This, so advantageous for all styles of Painting, is indispensable in Fresco, as it is not possible to sketch, at once, all the different parts of the Picture: the Painter must not only have finished, in the day, his given part, but this must be so executed, as to render it impossible to discover, after the work is entirely performed, that it has been painted by pieces.

The colours most generally used for Painting in Fresco, are:

All the coloured Earths
Ochres
Mountain Green
Lime-

Lime White	Blue Black
Marble White	Cinnabar
White of Egg-shells	Enamel Blue
Burnt Vitriol	Ultramarine.

PAINTING

PAINTING IN GOUACHE,

Or, BODY COLOURS.

THIS Process of Painting may be considered as having preceded all others; at least it is the most ancient we know of.

It is probable the first colours made use of, for this manner of Painting, were nothing more than various stones and earths, ground and made liquid by means of water. Afterwards, by making use of different gums, they gave them a proper consistency: but as gums are found in drying to blacken and change the brilliancy of the colour, experience has substituted another method. The most celebrated Artists of the present day make use of *double size*, a preparation obtained from parchment, or fine glove leather: This preparation is not, like gum, liable to change or crack the colour.

A piece

A piece of this, about the size of a small apple, in a glass of water, will be found to be the necessary proportion.

The difficulties attending this style of Painting have discouraged many: it is seldom managed with success, even by those most accustomed to it. They have all the defect of making their tints undecided, thick, and grey, which to the eye of an Amateur, makes this style of Painting appear pale and mealy.

Among the number of Artists who have practised Gouache with success, may be reckoned *Clairisseau*, *Machi*, and *Perignons*. However, in their works may be discovered the same fault we mentioned; that is, their tints are grey and want transparency, owing to their using too much White and Black, which ought only to be done in ornamental Painting. These Artists have likewise a very heavy touch, which materially injures the beauty of their works.

Those

Those who have most excelled in this style of Painting, are Vaguer, Moreau, Nivar and Belanger—their Pictures are painted with infinite lightness—their middle tints are transparent, and their spirited foliage frequently approaches to the sublime touch of Moucheron. The works of each of these Painters prove, that the best manner of Painting in Gouache, is to follow the same method as in Oil Painting, making use of White only for your lights, and then but thinly, in order that through it, you may discover the address, lightness, and genius, that the Artist may have introduced in his first sketch.

To paint in Gouache, you must first paste your paper upon a board made either of walnut-wood or mahogany, taking care that its surface be smooth, so that your paper may lay quite flat: then, upon the other side of your board, paste another sheet of Drawing-paper, the same kind as that

that you mean to paint upon. This will prevent the board from warping, and neither time nor the injuries of the air will cause it to split.

In order to paste your paper upon the board, make use of a paste made of starch or very fine flour; add to this, double size, or *Flanders Glue*, purified by vinegar. To prevent the paper and the wood from becoming worm-eaten, mix with your paste a little garlic.

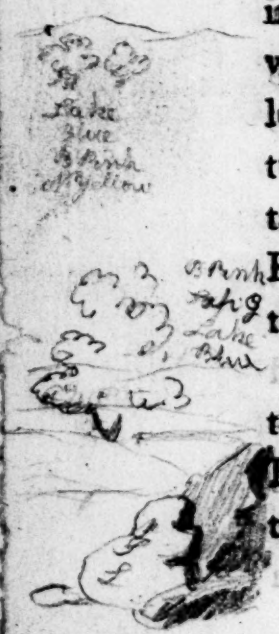
Your board thus prepared, draw your outline with Black Lead Pencil, taking care to make your lines sufficiently strong, as the first tint might efface them.

This done, begin the sky of your Landscape with a tint composed of White, Prussian Blue, and (to prevent your tint being too cold) a very little Lake; extend this tint very lightly, and without thickness, to the part nearest to the horizon, mixing White by degrees, so that the strength

strength of colour gradually decrease, as you approach the mountains, or other parts that appear to blend with the atmosphere.

For the mountains make use of your first tint, in which add a little more Blue and Lake, so as to render your tone more decided, and that it may relieve from the sky. For the lights of the mountains use a paler tint than for the horizon,

For the trees nearest the horizon, use the first deep tint of the mountains, and in order to make the tint warmer, mix with it a little Brown Pink and Naples Yellow. If, in the composition of the Picture there happens to be many plains, take care to make the Prussian Blue, or Brown Pink, predominate, according as the objects may be more or less distant.



In general, for the rocks and trees of the first and second plain, make use of Brown Pink, Sap Green, and Lake mixed together. For the trees, use less of the Prussian

Prussian Blue and Sap Green, than of the Brown Pink. For the rocks, use the same tint as for the trees: it will be necessary to use another colour, as they terminate, but of that hereafter.

Be careful to use but little Sap Green in the tints of your trees; for, this colour being glutinous in its nature, will, if suffered to predominate, grease the paper, and prevent the second tints from spreading with facility.

If, in the spot you represent, there chance to be a Lake or a River, be careful in washing this part of the Picture, to reflect the same tints upon the trees, hills, or the objects that may be placed close, taking care to reflect the contour of these several objects in the water.

For those parts of the water that reflect the sun's rays, make use of the tints employed for the most brilliant clouds. This shews the necessity of preserving all your tints of reflection.

With

With regard to the middle tints and shadows, add to your tints of reflection, partly Brown Pink, partly Prussian Blue, and partly Lake. With this mixture wash your middle tints. For the dull parts, use only these three last colours, adding a little Sap Green.

The first wash of your Picture being finished in the manner indicated, delineate the different foliage, and, by degrees, determine those parts more, or less in shadow.

For your dullest tint, use Brown Pink, Indigo and Yellow Orpiment, or Yellow Ochre, as the subject may require.

As you advance upon the light masses of the trees, keep them more brilliant. This is done with Yellow Orpiment.

The Rocks are painted of various tints, as Greys, Violets, Ferruginous, Greenish, and Yellow-Greenish.

The Grey tints are made with Naples Yellow,

Yellow, Blue Black, and a little Lake. These three colours mixed together, compose a Grey both brilliant and transparent.

Avoid White Lead as much as possible; it is poison to Painting and always helps to destroy the vigour of the colours.

The Grey tints are used in the shadows, as likewise the Ferruginous tints, which are composed of Brown Ochre, Burnt Sienna, and a little Sap Green. You may give them still more force by adding Ivory Black.

Violet tints are in general made with Naples Yellow, Lake, and Blue Black.

Green tints are composed of Blues and Yellows; but take care never to mix the Orpiments with Sanders Blue, Green Verditer, and Water Green (this last is known in England by the name of *French Green*, or *Grass Green*). From the mixture of these colours, you must not hope to produce any true or natural tones.

Yellow Greenish
Yellow Ocher
B. Pink
Blue

Yellow-greenish tints are composed of Yellow Ochre, Brown Pink, and Indigo.

Glazing is a light and transparent tint, passed over different parts of the Picture, in order to give it the necessary harmony. It belongs to the Artist to multiply these tints more or less, according as the parts are more or less in shadow.

These tints are in general composed of Prussian Blue, Lake, and a very little Sap Green. It is impossible to give any precise directions for their composition, as they must be combined according to the tones, for which you would wish to apply them.

You must take the greatest care in finishing your Picture, to preserve the lightness and spirit of the first sketch. For this purpose avoid making the tints you pass partially over the first colour, too thick, even in the fore-grounds; for these, you must absolutely follow the same process as for the other parts of the Picture.

It is only in following the rules we have indicated, that you will succeed in giving to Gouache the vigour and perfection of Oil Painting. Gouache requires a long and assiduous application; but the study is agreeable, and is not accompanied with those inconveniences, that are inseparably attendant upon Oil Painting.

Gouache requires great neatness; it is likewise necessary that the colours be ground and purified as much as possible, so that the particles may perfectly combine, and the different tints preserve their brilliancy.

It is essential to know the nature and mixture of the different colours you make use of, if you would guard against the inconveniences, which the air and sulphurous vapours occasion. Be particularly careful with respect to the Orpiments; use them with precaution, and in general, reserve them for the most brilliant touches of light.

The colours most necessary for Gouache are :

White Lead	Sienna
Naples Yellow	Lake
Red Orpiment	Green Verditer
Yellow Orpiment	Sanders Blue
Yellow Ochre	Vandyke Brown
Brown Ochre	Cologne Earth
Brown Red	Sap Green
Burnt Sienna	

We think it not unnecessary to repeat to the Amateurs of this Style of Painting, that the general fault of Pictures in Gouache, is their being pale and mealy. To guard against this inconvenience, use for your first tints, colours both solid and transparent, so that the colour passed over in finishing, may the more readily partake of this transparency, and produce a vigorous and determined effect.

PAINTING IN MINIATURE.

CUSTOM seems to have derived the name *Miniature* from that of *Mignard* signifying *delicate* or *flattering*. In effect, Miniature, from the smallness of its objects, and its extreme high finishing, in imitating Nature, seems to flatter and embellish it; an effect generally arising from reducing large objects to small ones.

Miniature is the Style of Painting most generally adopted by Amateurs of the Arts. It is by this in general, that persons who have not drawn a great deal, begin. We therefore thought it would be an encouragement to young beginners, to give them the instructions necessary to accelerate their progress, and sure and circumstantial directions to enable them to paint well.

Miniature is painted either upon Paper, Vellum or Ivory, and the colours are prepared with various gums, according to the nature of each.

The greatest majority of Artists and Amateurs paint Miniature upon Ivory, which is, upon every account, preferable, when well prepared, either to Paper or Vellum.

Ivory requires a long and tedious preparation, without which the colours will not attach. It would likewise be too Yellow, if used immediately from the turners. It must be whitened, and the grease extracted, in order that it may the better receive the colours.

It is whitened by being exposed to the heat of the sun, between two thick glasses, or at a moderate distance from the fire. The glasses must be turned every half hour, so that the two surfaces of the Ivory may receive equal heat, and not be liable to

split; it must not be taken from between the glasses, till perfectly cold.

When the Ivory is sufficiently whitened, place it upon an even surface, and scrape it in every direction, with a tool called a *scraper*, in order to make it perfectly smooth. This done, the Ivory is rubbed with powdered Pumice stone rather coarse, and moistened with distilled vinegar. With this, any scratches that may have been made with the scraper, are done away. The vinegar, by its acidity, opens the pores of the Ivory, and makes it receive the colour better; the Ivory is then wiped with a linen cloth, and is again rubbed with finer Pumice, either used with paper or cotton. This operation is continued till the Ivory is perfectly smooth and polished.

The Ivory being thus prepared, lay it upon a card, and with thick gum arabick, fasten down the four corners to prevent it warping. Artists, who paint in this

way, should have several Ivory Pallets, one of which should be wholly reserved for the colours used for the flesh. These are, for the most part, transparent, as it is necessary that the white of the Ivory be seen through them; which gives an infinitely more brilliant effect, than if painted with opaque colours. They are used in the same manner, as *glazing-colours* are in oil.

The colours for the flesh, and of which the first pallet should be composed, are the following:

Chinese Vermilion	Vandyke Brown
Carmine	Saturnine Red
Burnt Carmine	Ivory Black
Crocus Martis	Indian Ink
Mars Yellow	Indigo
Gall Stone	Ultramarine first
Precipitate of Cassius	and second qua-
Burnt Sienna	lity.

The principal colours for Draperies and back-grounds are these:

Light

Light White	Brown Red
Naples Yellow	Prussian Blue
Yellow Ochre	Antwerp Blue
Red Ochre	Blue Ashes
Brown Pink	Lake
Burnt Umber	Red Orpiment
Dutch Pink	Yellow Orpiment.

Chinese Vermillion, or Saturnine Red, glazed with Carmine, makes a most beautiful Scarlet.

When the colours are arranged on the Pallets, it is indispensably necessary to place them where they cannot be injured by any dust; it being destructive to Painting.

All the above mentioned colours should be purified with spirits of wine, and prepared according to their different qualities. If those that are of a dry nature, as the Lakes, Prussian Blue, &c. &c. were prepared in the same manner as those that are unctuous, it is evident, that the

result would be injurious to the work, and would present many difficulties to the Artist. It is therefore very important, that those who employ themselves in the preparation of colours, neglect nothing to discover their qualities, in order to prepare each, according as its nature requires.

It it necessary for the preservation of colours, that they be enclosed in glass bottles so stopped, as to prevent any dirt from entering, and to guard against the inconveniences that the influence of the air, and phlogistic vapours, have, more or less, upon colours, notwithstanding they may be pure and well prepared.

Choice should be made of Pencils of various sizes; those for sketching and washing should be thick; those for finishing the flesh, more pointed.

The apartment in which you paint should be lighted only from one window, and that from the left, beginning about

five

five feet from the floor, in order that the light come only from above. You should also have a desk on a table, so raised as to prevent you from stooping, and be particularly careful that your fingers never touch the Ivory, as it will effectually prevent the colours from adhering. Your hand should rest upon some fine linen three or four double, which will also serve to cleanse your pencil, when too full of water, before you take your colour from the pallet. By this means, you are not obliged to put the pencil in your mouth; which is as hurtful to your health, as it is destructive to the Painting.

These preliminary details may perhaps appear too minute to those Artists, who may have formed a manner of their own, and who by different means may have attained the same end, that of imitating nature with force and truth. It is not for those we have written; our intention is to be

be useful to Amateurs, who have it not in their power to have masters, and yet would be glad of directions clear, simple, precise, and, one may also say, mechanical. For if, in Miniature, you work in the dark, and are obliged to teaze your picture by continually effacing, it must be at the expence of the clearness of the tints; by which means the labour of the Painter will always be discerned.

The position of the sitter being determined, and the Ivory well prepared, you must begin by painting the carnations. We will give for examples, two heads of different colours: that of *a man*, dark and forcible; the other of *a woman*, fair and transparent; leaving to the Artist or Amateur the choice of varying, according to his inclination, the different degrees of colour he may wish to express, by taking, as he may have occasion, the intermediate tones of the two examples we shall offer.

TO

TO PAINT A MAN's HEAD IN MINIATURE.

You must have a silver point, inclosed in a wooden handle, of the size of a common pencil, and pointed in the same manner. It is with this the first sketch is drawn, and it must be done very faint.

The attitude and features drawn, which, in this first sketch, should be seized as quick as possible, trace it with burnt Carmine. Your pencil must be rather fine. Take care to give stronger touches to the eye-lids, the nostrils, the corners of the mouth, &c. It is necessary in this outline, to have every thing in its place, so as not to be under the necessity of effacing any. If, however, this should be unavoidable, take a paper stump, and, with a little powdered pumice, rub it on the place.

Having

Having proceeded thus far with your outline, you must take a pencil that is not too pointed, and in one corner of your pallet, compose a tint of burnt Sienna and a very little Indigo, with which you cover the strongest shadows. The touch must be firm, and the pencil so used as not to draw with the point. Particular care must also be taken, not to repeat the touch, till the first is perfectly dry, as you would by that means take off the preceding colour. Avoid taking too much water in your pencil; it prevents the touches from being firm, and also prevents your laying the colour on equally.

When you have covered the strongest shadows, such as the eye-brows, and the eye-balls, unless they are of a light blue, begin the middle tints approaching nearer to the lights. This is done with Crocus Martis, if the complexion is very red; if not, use Vermillion mixed with a little burnt Carmine.

The

The lips are begun with Vermillion, and finished with a little burnt Carmine. All the flesh is first done with red: be careful, however, to keep it very faint at first. As you approach the lights, use Saturnine Red, always keeping the most brilliant colours for the lights, reserving the Ivory for the high lights.

You must now carefully examine if every thing is in its place. Then, with a faint tint, correct, blend, and soften the lights and shadows together; by keeping the colours faint at first, you will have the resource of strengthening your Drawing, rather than be under the necessity of taking off any colour.

Having thus far advanced the flesh, you must cover the hair, the Drapery and the back ground, in order that none of the Ivory may be seen.

If you wish to represent powdered hair, mix a very little Light White with more

more or less Black, Indigo and Red, in proportion as you would have it appear more or less powdered.

If they are Grey, put less Red.

If Red, make this colour predominate, by adding to it a little Yellow.

If the hair is Light, mix Light White, Black, Red, and Yellow. This last colour must predominate.

Should the hair be Dark, make a tint of Burnt Umber and Black, without mixing any White.

You must, with a large Pencil laid flat, pass a light wash of these tints over the hair. Through it, the shadows and the forms of the curls that have been previously drawn, will be seen. Over this, determine the parts, softening in the same manner as mentioned for the flesh.

The *body-coloured back-grounds* are done with *opaque* colours; the others, with those that are *transparent*. These last are not

not so heavy, and are infinitely more easy to execute; they require a longer time, but are always likely to succeed. It consists of washing with a large Pencil, with the colours that have no body, such as Indian Ink, Mars Yellow, and Indigo. Use more or less of these colours, according as you wish your back-ground to be warmer, or more aerial. These grounds are finished by hatching or stippling.

The back-grounds *in Gouache* (or body colours) are far more difficult to execute, and require great practice; if you do not succeed the first time, the whole of the colour must be taken off, and begun again.

The light grounds are done with Ivory Black, Naples Yellow, or Dutch Pink, and Indigo,

For the dark grounds, you must use Ivory Black, Indigo, and Red Ochre—you may also add a little Red Orpiment.

The sky grounds in body colours are done in the manner mentioned in the article *Gouache*, which instructions must be strictly followed, if you wish to paint Landscapes in Miniature.

As much as possible, avoid the use of White in the back grounds.

Before you begin your grounds, you prepare your different tints; then, with a large pencil, lay them on quick, and never retouch one part, without covering the whole.

Linens and muslins are done the same as hair, by drawing first the shadows and folds, with Indian Ink or Blue Black. The reflections are done with Yellow Ochre, or a little Naples Yellow with Black. If you wish your linen to have a Blue cast, use Indigo. The lights are afterwards touched with White. These must be very firm, and not retouched, as the colour would be too thick, and the linen appear heavy.

When

When the lights are too strong, they may be kept down with a faint tint of one of the above-mentioned colours; it contributes greatly to the harmony of a Portrait.

Dresses are done as the back-grounds, either with *transparent*, or *opaque* colours. It would be useless to enter into a detail of each tint necessary for the various colours of Draperies. It will be sufficient to add, that the same as in back-grounds, there must be three tints, a light, middle tint, and a dark one. Begin with the largest masses, and use a large Pencil, reserving the strong lights and dark touches till the last. If you wish the colour to be more forcible, you may add a little Gum.

Having covered the Ivory, and lain in the largest masses, without attending to the details, you may again work on the flesh. Wash a little tint of Indigo near the lights of the face, where there is a

blueish hue, as the temples, the middle of the forehead, the contour of the mouth, and the lower part of the face, to distinguish the beard, particularly if it is dark, and round off the parts.

You must afterwards go over the shadows with faint washes of Indigo, and, if necessary, use Indigo mixed with a little Mars Yellow, in order to make the tint a little Greenish, observing always to blend the colours. These Blue and Green tints serve to diminish the redness of the shadows, and to give them more transparency; which would not be the case, were the Blue and Green mixed with the tints used in the sketch. The Blue must be used to blend the middle tints with the shadows. It is in this part more particularly, that the Grey tints must be attended to—they must not, however, be exaggerated by making them too hard, which frequently happens, if the Blues and Greens are not used with great

great delicacy. It would be well, from time to time, to place your Miniature at a certain distance, in order to judge of the effect of the whole together; otherwise, after much pains, you may find your intention defeated.

It is in this part the greatest attention ought to be paid to the blending and softening the tints together, in order that they shall the better imitate Nature.—Form no hard and determined lines, particularly in those parts that should turn; for that reason, avoid using *brilliant* colours, but only *light* and *vapourous* ones.

The warm and brilliant tints should be next to the great lights. Never place them near the strong shadows, but always let the colours blend one into the other, and finish with the lights. Under the eyes, and in those places you may find it necessary, lay on a tint of Purple, either with Precipitate of Cassius, or Burnt Car-

 mine;

mine; the same with Red and Yellow tints, always doing it so faint, as rather to be obliged to add, than take off any colour. In the lights you must soften as much as possible, with Vermilion, Blue and Violet; with Burnt Terra de Sienna, and Blue in the shadows. These colours must be so blended, as to prevent distinguishing those you may have used.

The strongest touches must be left till the last, such as the pupil of the eye, (which is done with Ivory Black more gummed than the other colours); the eyelashes, the shadowed side of the eye-brow, if they are black. For the last strong touches of a face, use Bister or Burnt Umber, mixed with a little Burnt Carmine. The visual ray is done after the face is finished.

It is sometimes necessary to put strong touches of light upon the nose and the corner of the eyes: This must be done with

with White and Naples Yellow—touch it with the utmost delicacy, and very thin of colour.

The flesh being finished, you must entirely finish the back-ground, before the drapery and hair. It is more particularly necessary in grounds *à la Gouache*; for, as they require to be done very quick, you might involuntarily cover part of the hair and drapery.

The Miniature must be finished by the dress, in order to give all the force necessary.

How to Paint a Woman's Head in Miniature.

To paint the carnation of a woman's or a child's head, the preceding measures may be adopted, with this difference, that the shadows must be begun with Vermilion and Precipitate of Cassius, or Burnt

Carmine, in order to give the tints a more Violet hue. Near the shadows, you must use Vermilion, but very faint, if the complexion is very fair. The Ivory must be reserved for the great lights.

The Violet tints are done with Precipitate of Cassius or Burnt Carmine. For the reflections under the chin, use Mars Yellow, and for the shadows, pure Ultramarine, but very lightly. If the complexion is very dark, use for the shadows, the same colours as mentioned for a Man's Head.

The lips should be begun with Vermilion, and finished with very fine Carmine.

In all those parts where, for a Man's Head, you would use Indigo, in a Woman's use Ultramarine of the first and second quality.

It is particularly necessary in a Woman's Head that you should attend to the blending and softening of the colours, till you have produced that general union and harmony,

harmony, by which the Pallet of the Painter may be said to be concealed. This rule should be observed in every Style of Painting, but more particularly in Miniature; for, as it requires minute inspection, the Artist must endeavour, by every method, to conceal the appearance of labour.

We would likewise recommend to those Amateurs, who apply to this Style of Painting, to pay great attention to neatness—to be careful that the dust does not collect upon their work. For which reason, they should have near them a large Camel Hair Pencil, and pass it frequently over the Miniature and Pallets.

PAINTING IN AQUAREL,

Or, WATER COLOURS.

THIS Style of Painting can be considered in no other light, than Coloured Drawing, in which the White Paper serves for the lights.

All the middle tints are done with transparent colours, and of course without thickness.

The shadows are first prepared with Indian Ink, and are afterwards glazed according to the different tones of the object you wish to represent.

The tints are composed in the same manner, as for Painting *in Gouache*, or Body Colours; with this difference, that you must never make use of White, and that your colours must be laid on very thin.

Be

Be careful to paint the various objects you represent, a little more brilliant, than they appear in Nature; because the Indian Ink used in the first wash, always weakens the brilliancy of the colours.

Prussian Blue, having a tendency to turn Black, must be used as little as possible.

The expeditious manner in which you represent in Water Colours, the different effects of Nature, renders this Style of Painting very valuable.

It is in Aquarel, or Water Colours, that the greatest number of Amateurs begin to study the effect of Colours, and this Style of Painting is an introduction to all the others.

PAINTING

PAINTING IN PASTELS,

Or, CRAYONS.

THIS is a modern Style of Painting. It is done with Crayons instead of Colours. The word *Pastel* is derived from the different coloured pastes, of which the Crayons are made. Of all methods of Painting, this is the most easy and convenient.

You may paint in this way, either upon Paper, Vellum, or Cloth. La Rosalba and de la Tour, who have excelled in this manner of Painting, painted upon a blue Dutch Paper. The Blue and Grey Papers made in England, are also well adapted to this purpose, and require no preparation; be careful not to choose that which is glossy. There is a Blue Paper made in Holland, thicker and larger than that generally used; it requires a similar preparation

preparation to cloth, of which we shall speak hereafter—otherwise, it would be woolly, and the Picture have the appearance of being painted on Ratteen.

Prepare the Paper as follows:—Take a stretched canvas, that is not too fine, and without knots; on this paste a sheet of Paper, that is smooth and not glossy, and upon this paste another Paper, upon which you intend to draw.

If you wish to paint upon Vellum, you must procure a sheet, that has had the grease well extracted, and, as much as possible, of an equal thickness; otherwise, the colours will not adhere but fall off in the course of operation. After having damped the glossy side of the Vellum, stretch it on a frame with flat nails, and paint upon the surface that is roughest.—The celebrated Liotard always painted upon Vellum.

If you paint upon Cloth, you must

nail

nail some very fine upon the frame. It must be free from knots, and yet sufficiently strong to bear stretching. There must be wedges upon the angles of the frame, to allow the cloth to be stretched, when it has loosened.

Before you paint upon cloth, you must lay on a preparation of the best Flanders' Glue, and Pumice-stone sifted through tiffany. Boil this mixture, and immediately spread it upon your canvass, with a very large brush, such as is used in Water Colours. Half a stick of this Glue, with two spoonfuls of Powdered Pumice, in a pint of water, will be the proper proportion.

When this paste is quite dry, before you begin to paint, rub the surface with a smooth Pumice-stone, in order to make it perfectly smooth and even. This must be done very lightly; for, in rubbing too hard, you would take off the Glue, and the preparation would be of no use.

In

In preparing either canvass or paper, it is better to put too little, than too much Glue; otherwise, the preparation will be too smeary, and make it difficult to work the colours. The same preparation will not do for a second Picture, even should you boil it over again.

The celebrated Pillement and Viviens, who have left so many fine Pictures in this way, always painted upon cloth—the Portraits of the latter are as large as life.

No great success in this mode of Painting can be expected, unless you have procured Crayons of brilliant tints, that are tender, corresponding with those in Nature, or to the Picture you mean to copy. They are made very good at Lausanne, Vevai, Nuremberg, and Paris. Those from Nuremberg are fine and made of a firm texture, and are more suited to small objects; their tints are sufficiently brilliant for flowers. Those of Switzerland are excellent,

lent, and will serve equally well for figures, flowers, and fruits. The celebrated de la Tour and la Rosalba painted with those from Paris; which sufficiently proves their excellence.

When the paper, vellum, or cloth is prepared in the manner before mentioned, begin the sketch of your Picture with a dark Crayon, and correct your outline with a reddish brown Crayon; and, if the whole is not sufficiently exact, correct it again with a deeper colour.

If you wish to efface any part, whether finished or only sketched, first rub off the colour with a linen cloth; then, with your finger, take a little pumice, that has been sifted through a silk, and rub it on the place: afterwards, blow off the pumice and resume the operation as before.

There is this difference between Oil and Crayon Painting, that, for the first, you arrange the necessary tints upon the pallet, before

before you lay them on the canvass; but in Crayons, you frequently lay several tints one upon the other, in order to produce, by blending them together, the necessary tint.

The general fault of those who begin this method of Painting, is that of using too little colour. It is true, that in Painting any object whatever, a head for example, you must be prudent in the choice of your tints; but when you find they produce the desired effect, you must lay them on with firmness, without fear of laying on too much. The first tint must be warm, in proportion to the subject you represent.

When the whole is sketched in, so as to produce an effect, when placed at a distance, and which can only take place, when the lights, shadows, and reflections are properly arranged, you must examine whether there is sufficient body of colours

to allow blending them with the fingers: you then begin to blend them together, always remembering to have before you the model from which you are Painting. After having mixed the colours, compare the tints with your model, and, if more are necessary, apply them to the parts required.

In blending the colours, you must take care to preserve the spirit of the sketch; otherwise, you will be liable to lose what most contributes to the likeness, more particularly if the person has great vivacity in his countenance; for, by the fatigue of sitting, the muscles will become relaxed; but, if the party from whom you paint has little character, there is less to fear, as the muscles have less movement from the beginning.

When the whole of the head is blended, begin to finish your Picture. After having examined each part separately, then give touches

touches in different places, in order to produce general harmony; finish by the strongest and most spirited touches, to give expression, relief and truth to your subject; but these touches must not be blended.

In all we have said relative to this method of Painting, we have supposed the person acquainted with Drawing, and that he has also studied from plaster and from nature. In this case, his progress will be rapid, provided he has a taste for colouring.

In Crayons, as in all other methods of Painting, it will be of great importance to see an Artist paint, and to hear his advice respecting these colours, that are apt to fly or change by mixing. By that means, an Amateur would soon be enabled to paint well.

Having had little practice ourselves in Crayon Painting, we have had recourse to a Mr. Longastre, who is well versed in this

manner of Painting. He has kindly communicated to us his knowledge of the subject, and it is from his principles that we have inserted the present details.

A METHOD FOR FIXING CRAYONS *or* OTHER COLOURS.

TO succeed in fixing these colours, you must first place your Picture vertically, or rather a little inclining upon an Easel or chair, placed against a wall. You must have a pocket brush with the hairs rather short, and a rod of iron of about six or seven inches long, of a triangular form, and one end bent; the branch of a sculptor's compass would answer the same purpose.

This done, take a pint of very clear water; put in it two large lumps of good Isinglass cut in very small pieces, boil it in *Balneo mare*, until the Islinglass is quite dis-

dissolved; afterwards, strain it through fine linen, that there may be no sediment. As you use it, pour a little in a saucer, and always add to it a double quantity of the best Spirits of wine.

While this mixture is lukewarm, dip the hairs of the brush in the saucer, and pass over it several times the bent end of the iron rod, so as to squeeze the hairs, drawing it always towards you. By this means, the greatest part of the water falls, and leaves the hairs only moistened; then, hold the hairy side of the brush towards the Picture, at the distance of about eight or ten inches, and press the hairs with the bent end of the rod, always drawing it towards you; begin with one of the corners. This operation throws a kind of imperceptible shower upon the Picture, which penetrates through the Crayons and fixes them. Observe to dip the brush in the saucer, whenever it becomes dry, and repeat this

operation successively upon every part of the Picture.

When the whole surface of the drawing in impregnated with this dew, let it dry; repeat it a second and a third time: oftener would be unnecessary. The end proposed is only to unite the different particles of the Crayons, which are only powders, and to endeavour by touching, they may not come off. You can by no means rub Pastel Drawings: it would spoil and take off the velvet of the Crayons. It is an error to suppose that Crayon Drawings, even when fixed, will bear varnishing; it would only change the colours.

Instead of water, you may dissolve the Islinglass in *Kirshwasser*. This liquor is preferable, as it has more spirit and dries quicker. The proportions are two spoonfulls of *Kirshwasser* to one of spirits of wine.

In

In this manner you may fix all kinds of Drawings, with this difference, that instead of resting them against an Easel, you may lay them flat. There are, however, many works of great masters, that cannot be fixed in this manner, owing to the pumice, the glue, or other preparations they may have used, or from their having varnished the sketch. It hath been proved by many experiments, that the mixture will not only take off any mouldy spots, but give fresh brilliancy to the colours.

COLOURS.

ALTHOUGH from habit, acquired in our earliest infancy, we suppose Colour to exist in Bodies, nevertheless it is evident, and generally acknowledged, that the word *Colour* denotes no *property* of Bodies, but simply a modification of our mind, and only marks the particular sensation, which is the consequence of the shock produced in our sight, by such and such luminous corpuscles.

Those Bodies we call *coloured*, are only to be considered as Bodies, that reflect the light with certain modifications; the variety of colours proceeding from the different textures of Bodies, which render them fit to give such or such modifications to the light.

Colours *in Bodies* are only a disposition

of these, to reflect such or such rays of light, rather, or more abundantly than the others: Colours, *in the rays of light*, are only the disposition of these rays to produce such or such emotion in our organs: finally, Colours *in us* are only the sensation of this emotion, under the idea of *Colours*.

Colour exists no more in Bodies than *sound* in a Bell, in a musical instrument or any other sonorous body; but *sound* is no *property* of these bodies; it is, *in them*, nothing more than the result of a vibrating motion: it is, *in the air*, only a like motion communicated by that of the bodies: finally, it is *in ourselves*, but a sentiment of this emotion, under the idea of *sound*.

The rays of light present to our view, only seven principal or primitive colours, which are: Red, Orange, Yellow, Green, Blue, Indigo, and Violet. All the other colours, from the White down to the Black,

Black, are only mixtures of these principal colours differently combined. The White and Black cannot be ranked as colours; the first is only a composition of all the various colours combined together; the second is a privation of all colour.

After having given a slight idea of the theory of colours, we will consider their relation to the Arts, but principally to Painting, it being the end of this work.

All colours used in Painting are composed of mineral, vegetable, or animal substances, and sometimes of a combination of the three. We shall treat at length of every colour, that is commonly used in the different styles of Painting.

It appears that nature has constantly made use of different modifications of Iron, to colour mineral, vegetable, and animal substances: the other metals are never, or, at least, very rarely found to colour natural Bodies.

The

The different dissolutions of Iron, produce Yellow, Orange, Red, Violet, Blue and Black.

Various dissolutions of Copper give Blue, Green, and Black. Gold, in a state of calx, or oxigen, produces Purple, which is frequently changed to a Violet, Black, and Brown.

Lead dissolved and calcined, gives White, Grey, Minium, Yellow Litharge, Black Litharge, and Black.

A dissolution of Tin helps to give Scarlet part of its beauty.

Cobalt gives to Enamel a blue colour.

A combination of Mercury and Sulphur makes a red colour called *Cinnabar*.

They call *Local Colour* in Painting, that which by the situation it occupies, and by the help of some other colours, represents a particular object, as flesh, linen, a stuff, or any object distinguished from the others. It is called *Local*, because

cause the place it occupies, requires it to be such, in order that it may give a truer character to those colours that are near. *Local Colour* should agree with the truth and the effect of the distances.

They call *middle tints* in Painting, a combination of two or more colours, that moderate the tone of the principal one. Then, this is not so brilliant, but it makes the others appear more so; which reciprocally add to its effect: it corrects and softens their rawness.

Colours acquire their brilliancy only in proportion as they are deprived of all heterogeneous matter: nothing can be mixed with them without injuring them. This principle, demonstrated by experience, proves the necessity of only using the purest oils, and the best distilled water for Painting.

We are under the necessity in all styles of Painting with water, to use a mixture

ture in the preparation of the colours, to make them fix the better upon the substance on which we are to paint. This mixture ought to be combined according to the quality of the various colours, which almost all require different mixtures; and all these injure the colours more or less, because the heterogeneous particles with which they are allied, change the texture of the composition, and occasion them to reflect differently the rays of light. From hence it follows, that all colours that shall have been mixed with too much of these preparations (even though the preparation should be proper for the colour), will take a different tone, which, in course of time, will become deeper and deeper, because all incorporating bodies absorb, in drying, the rays of light which they reflected before.

It is therefore very important for the preservation of Drawings in water-colours,

lours, to mix with the colours, only what quantity of preparation they absolutely require, and only that which suits the nature of the colours.

A VIEW

OF THE DIFFERENT COLOURS, CLASSED ACCORDING TO THE DIFFERENT KINGDOMS, FROM WHICH THEY ARE EXTRACTED.

COLOURS FROM THE ANIMAL KINGDOM.

Cochineal	Lake
Carmine	Indian Ink
Purple	Pearl White
Gall-stone	White of Egg Shells.

CAR-

CARBONIC AND BITUMINOUS ANIMAL SUBSTANCES.
- Ivory Black
- Bone Black
- Stag-horn Black.

COLOURS FROM THE VEGETABLE KINGDOM.

RESINS
- Copal
- Sandarac
- Dragon's Blood
- Gamboge.

GUMS
- Arabic Gum
- Senegal Gum
- Tragacanth Gum.

LEES
- Indigo
- Sap Green
- Iris Green
- Sun-flower Blue
- Dutch Pink
- Artificial Brown Pink.

CARBO-

CARBONIC AND BITUMINOUS VEGETABLE SUBSTANCES	Charcoal Black Lamp Black Bister Blue Black Peach Black.
GOLD	Precipitate of Cassius.
SILVER	Light-White.
MERCURY	Cinnabar, *or* Vermilion.
IRON	Ochres Mars Yellow Sienna Burnt Umber Vandyke-Brown Cologn Earth Brown Red Indian Red Calcined Vitriol Natural Brown Pink Prussian Blue Antwerp Blue Prussian Green.

Verdi-

COPPER
- Verdigrease
- Distilled Verdigrease
- Blue Verditer
- Sanders Blue
- Mountain Green, *or* Malachite
- Sanders Green
- Azure Green
- Green Verditer.

LEAD
- White Lead
- Massicot
- Minium
- Saturnine Red
- Naples Yellow, *or* Giallolino.

COBALT
- Smalt
- Enamel Blue
- Violet Blue.

ARSENIC
- Orpiment
- Realgar

ZINC
- White of Zinc.

EARTHS AND STONES { Lapis Lazuli, Spanish White, Lime White.

We do not mean, in the course of our work, to arrange the colours in the above order; they will be classed according to their different tones: for example, we shall begin with the Whites, afterwards the Yellows, and so on; and, in order to give more facility to our Readers, we shall, at the end of this Treatise, add an alphabetical list of them.

WHITES.

WHITES.

WHITE being a colour essentially necessary in Painting, we shall treat of the different varieties which are commonly used, and point out those we believe most adapted to the several styles of Painting.

SPANISH WHITE.

THE most common White is that called *Spanish White*, or *White of Rouen*. It is nothing more than a species of White Chalk, which separates very easily in water. In order to purify it, put it in a clean vessel, and dilute it with clear water. This is easily done, and need not be fingered. Being dissolved in a great deal of water, let it be well stirred, and left a little time to settle, in order that the gravel may sink to the bottom; then, pour off all the water into clean vessels, and let them remain till the

White sinks, and the water be left perfectly clear; after which, decant the water without disturbing the sediment. When the White is almost dry, form it into cakes, and leave it in the air to dry.

This White is much used for large Drawings in water colours; but it is not proper either for Oil Painting, or Miniature.

LIME WHITE.

This White, the best that can be used for Painting in Fresco, unites very easily with all the other colours. It is easy to use, provided it be composed of excellent Lime, burnt at least six months. Wash this White with common water; then pour it slowly into a vessel, and let it remain for sometime to settle; after which decant the water, and the White will be fit to use.

There are Painters who make use of a composition, half Lime, and half dust of White Marble.

WHITE OF EGG SHELLS.

This White, which may be used in Painting, is composed in the following manner:

Take a quantity of Egg Shells; bruise them and clean them well, by boiling in water with a piece of quick Lime; then, wash them in clean water, and bruise them again, so as to compose a finer powder; after this wash them several times, till the water appears perfectly free from dirt. Having proceeded so far, grind the shells with the muller, and reduce them to the finest powder. Leave them in the sun to dry.

WHITE LEAD.

WHITE Lead, much used in Oil Painting, is a Calx or Oxigen of Lead, of a very fine White, made by exposing the Lead to the fumes of Vinegar. This matter is the same as Ceruse. To render White Lead perfectly fine, chuse the finest in scales; grind it well upon a marble with vinegar: it will become Black: then take an earthen pan full of water, and wash the White; let it settle, and then pour it off by gently stooping the vessel; grind it again with vinegar and wash it. By repeating this operation three or four times, you will procure a White perfectly beautiful, fit for colouring and Oil Painting.

All the White Leads prepared, will, in time, turn Yellow or Black. This is occasioned by the phlogistic vapours, with which the air is always, more or less, im-

pregnated; or to speak in the language of the Chymists of the present day, they become oxigenated by their union with the oxigen of the air. Mr. de Morveau first conceived the idea of substituting Lime of Zinc, instead of Ceruse, and, by that means, has rendered a very essential service to Painting.

WHITE OF ZINC.

White of Zinc has the property of not changing its colour, by any of those means that would immediately blacken any Whites extracted from Lead. It unites perfectly with all other colours; but, as it wants body, it is mixed with White extracted from silver, obtained by the following method.

WHITE OF SILVER.

To make this White, take a sheet of silver, which you beat as thin as paper;

cut it in pieces about the size of a half-penny; steep it in Aqua Fortis for twenty four hours; being dissolved, pour off the Aqua Fortis, and wash what is left at the bottom of the vessel, five or six times in distilled water, till there be no remains of Aqua Fortis left in the dissolution; which may easily be known by touching it with your tongue. It is afterwards dryed.

WHITE OF PEARL.

To obtain this White, take Oyster-Shells bleached by the sun on the sea shore; or you may calcine them, till they can be reduced to powder, without however burning them, as it would change the colour; afterwards, separate the whitest part, and levigate it with water; till it is reduced to an impalpable powder.

This White may be used for Miniature.

YELLOWS.

YELLOWS.

NAPLES-YELLOW, *or* GIALLOLINO.

NAPLES Yellow was long used, before either its nature or origin was known. It resembles a sandy, porous stone; its grains are of a fine Yellow. Till the present time, the supply was drawn from Naples: formerly one person furnished the whole.

Mr. d'Arclais de Montamy, in his Treatise upon colours for Enamel Painting, says, that Naples Yellow is a stone of a pale or deep Yellow; that it appears composed of a species of a yellow sand, loosely combined. He believes it to be the production of a Volcano. According to him, Naples Yellow may be considered as Saffron of Mars, first produced by a Volcano, and then the colour brought to perfection by remaining in the Earth; or as a ferruginous

ginous substance, whose imperfect vitrification was afterwards decomposed.

It has been found that Naples Yellow is produced by art, and is a metallic calx. It is now brought to equal perfection with that of Naples, by incorporating with Spanish White, calcined Alum, Salt Ammoniac and Diaphoretic Antimony, all pure. Having well pounded this mixture, put it in a flat earthen pan, which must not be varnished; cover it, and let it remain upon a moderate fire, during seven or eight hours. It would succeed better, were it placed for twelve hours, at the top of an oven, upon a reverberated potter's fire.

In making Naples Yellow, by augmenting the quantity of Diaphoretic Antimony and Salt Ammoniac, the colour comes nearer to a golden Yellow.

Naples Yellow is produced by calcining a mixture of quick Lime, Minium, and a small quantity of white Pot Ash.

Mr.

Mr. Veber, who has made many experiments upon Naples Yellow, thinks that the degree of heat is what chiefly ought to be attended to, as the success of the experiment must depend upon it; and, that to procure it very fine, the heat must not be too moderate.

Naples Yellow is a softer and fatter colour, than either the Orpiments, Massicots, or Ochres. It unites with all the other colours, may be used both for back-grounds and fore-grounds, either with gum or with oil, and does not change. As it frequently contains an acid Salt, before it is used, it must be edulcorated; which is done by steeping it in water, after it is reduced to powder. In grinding it, you must use an Ivory knife,

ORPIMENT *and* REALGAR.

NATURE sometimes mineralizes Arsenic to a calx by means of Sulphur. The greater

greater or lesser abundance of Sulphur, that enters into this new produced substance, gives birth to Orpiment and Realgar. This last contains more Sulphur than the first. Orpiment is found in irregular forms, sometimes solid, sometimes in plates, of a fine citron Yellow, having a Green or Red cast, in proportion to the quantity of Sulphur it contains. Sometimes it is a deep Yellow, brilliant and shining like gold: it is then found in plates.

A greater quantity of Sulphur being combined with the Arsenic, produces Realgar, called in Painting *Red Orpiment*. It is frequently transparent, and of so fine a Red, as to have been often compared to rubies, and by some Authors has been called *Ruby of Arsenic*. Like Orpiment, it is found in imperfect masses, and of a great and lesser bulk; but frequently in crystals; which is rarely the case with Orpiment.

These two substances are found in large quantities in Guadeloupe, Japon, &c. In this last country and in China, they make Vases of the Realgar; they let vinegar and juice of lemon stand in them for a considerable time, and then take it by way of medicine.

A great deal of Orpiment comes to us by way of the Levant. It is likewise discovered in the mines of Hungary, Bohemia, and Transilvania.

The *natural* Orpiment and Realgar are far more beautiful, than those that are *factitious*, and are preferable for Painting.

To make *factitious* Orpiment, mix with great exactness powdered Arsenic with a tenth part of Sulphur, and sublimate of this mixture; the result will be an opake yellow mass; but this combination is never so perfect as that which is found in the natural state.

To make Realgar *or* Red Orpiment, mix

mix with Arsenic, a fifth part of Sulphur, and sublimate the mixture: if you wish the Arsenic and Sulphur to combine more intimately, melt again that which has been sublimated; then it becomes transparent, and resembles a Ruby. If you wish it to be more Orange, add more Arsenic.

The Orpiments are a very quick poison, and you must not expose yourself, without great precaution, to their volatility. Painters are frequently incommoded by them.

The Yellow Orpiment combined with Indigo, makes a very good Green. It will mix likewise with all other Blues, except Sanders Blue. When united with this last colour, it is liable to become Black, and is difficult to use.

GALL STONE.

Gall Stone is found in the gall of oxen. It is of different forms, sometimes round,

round, at others, oval. Ground very fine upon Porphyry; it produces a beautiful golden Yellow. It can be used for Oil Painting, though rarely: it is chiefly used for Miniature and Drawings in Water-colours.

To make an *artificial* Gall Stone, take half a pint of Oxen's Gall, as fresh as possible; put it in a tin vessel, and let it boil in *Balneo Mare* with a quarter of an ounce of clear Gum-Arabic; then, let it boil till it is reduced to an eighth part: after which pour it into a China vessel, and let it again evaporate over the fire, till, in drying, it forms a thick mass.

MASSICOTT.

Massicott is a calx of Lead of a Yellow colour. In melting Lead, a grey powder rises to the surface, which is a real calx of this metal. If after taking away this

this grey powder, you expose it to a more violent heat, it becomes Yellow, and is called *Massicott*.

It may likewise be made by taking Ceruse, which is Lead dissolved in vinegar. Put it in an iron box well closed; let this box remain in the fire, during four or five hours, at the end of which time, the Massicott is formed.

You may distinguish three different kinds of Massicott, White, Yellow, and Orange. They are three different species of calces of Lead, which have been exposed to different degrees of heat.

Massicott is useful for all kinds of Painting that require a body.

DUTCH PINK.

Dutch Pink is a yellow paste, made with a species of White Chalk or Marl. It is coloured by putting in the water, a decoc-

decoction of Buckthorn berries mixed with common Alum. From this mixture, is formed a paste dry and twisted, which is called Dutch Pink. It is manufactured in Holland. Choose it tender and brittle, and of a fine golden Yellow. It is used for Oil Painting and Miniature.

Dutch Pink is generally composed of White of Troyes, and Buckthorn berries; but this species is bad, and will change, it is better to make it of White Lead, or Ceruse.

The Yellow produced by Dutch Pink, is very susceptible of change from the mixture of other colours. When mixed with Brown Red, it produces an earthy colour; but when mixed with White or Blue, it gives a faded and vapourish one.

Dutch Pink is seldom used for Painting in Gouache.

GAMBOGE.

GAMBOGE is a resinous and gummy juice of a pale saffron colour, found in round masses and small cylindric sticks, without smell, and almost without taste. It is brought from the East-Indies, and flows from two trees, the one called *Carcapulli*, a species of Malabar orange-tree; the other *Ghoraca Dulcis*.

When Gamboge is placed near the fire, it burns and emits a brilliant flame, accompanied with a good deal of smoke. It will dissolve almost entirely in spirits of wine, and appears, from the experiments that have been made, to be a saline, resinous and gummy composition.

The entire dissolution of Gamboge acquires the colour of blood, by pouring in it, Oil of Tartar, or Lime water.

The ancients were unacquainted with this colour. Within this last century, it has

been much used by Painters, as it produces a most beautiful Yellow, easy to use, and generally employed for water colours. I is not good for the other methods of Painting, as it blackens by time.

MARS YELLOW.

The experiments we have made upon the nature, composition and use of Mars Yellow, have given us a perfect knowledge of its different qualities. We will not however enter into all the details of its composition, which, till this present day, has been known to few persons. It will be sufficient to assure our Readers, that this valuable colour, extracted from a dissolution of iron, and afterwards precipitated, is of essential service in all the different styles of Painting. It is light, solid, transparent, easy to use, and, unites perfectly with all other colours.

TERRA DE SIENNA.

THE *natural* Terra de Sienna, such as you buy at the shops, is a mineral earth, of which we cannot doubt that the essential and coloured part is of iron alone.

If, before it is ground, you calcine it in an iron box, during half an hour, a part of the iron will be regenerated, and become sensible to the touch of the Loadstone.

This earth is liable to the same, and even more inconveniences, than the *natural* Umber. It contracts and hardens so much in drying, that it is necessary, every time you use it, to grind it afresh. It becomes heavy, brittle, and turns black, when used alone. To remedy, as much as possible, this inconvenience, it is ground with essence of Turpentine.

The

The *factitious* Sienna has all the qualities, without the inconveniences of the *natural* one. Iron dissolved by Acids, and precipitated by Alkalies, produces this colour.

OCHRES.

Ochres are metallic Calcs combined, more or less, with heterogeneous substances, and of a consistency sometimes powdry, sometimes solid.

Martial Ochres which are frequently required in Painting, all proceed either from a decomposition of iron ores, or from that of Martial Pyrites. This last appears to have been their most common origin. In this decomposition, the iron is brought to the calciform state, more or less perfect; it consequently passes successively from the black colour of the

Ethiops Martial, which is the nearest to the Metallic, to that of a reddish Brown, and afterwards to a Red, more or less deep, in proportion as its calciform state is dispersed from the metallic one: it finishes afterwards by becoming Yellow, when the calciform state is perfect. You may afterwards, by the means of heat, make this Yellow Ochre change to Red; from that to the Brown; and this with an intenseness that gradually decreases from the heat first applied.

The natural Martial Ochres are frequently changed by the mixture of extraneous substances; by which means there is an infinite variety in their tones of colour; that furnish abundant resources to a Painter. From these changes, Ochres take different names, according to the different tones. When combined with a quantity of clayey earth, they generally take the name of *Bole*, which is afterwards dis-

distinguished by an epithet denoting either the colour, or some peculiar quality.

The principal Martial Ochres are: *Yellow Ochre, Ochre de Rue, Brown Ochre* and *Red Ochre.*

Yellow Ochre is of a brittle consistency and has the property of staining the hands. Some Mines of it are found in Berry. It is also called *Yellow Earth,* or *Mountain Yellow.*

Brown Ochre is only a *Yellow* Ochre, changed by the addition of an extraneous colour; it is sometimes like *Ochre de rue,* and sometimes like Moulard of Cutlers.

Ochre *de rue* is likewise called *dark Yellow,* and, when calcined, is a very fine colour.

Red Ochre, or *Mountain Red,* is friable, more or less deep, and acquires intenseness by fire.

They likewise give the name of *Ochre* to Copper reduced by nature to a calci-

form state. It is found in two different states, of a Blue and Green colour. In Mineralogy, when pure, the Blue takes the name of *Azur of Copper*, the Green that of *Malachite*. They are also named, especially in Painting, *Blue Ochre of Copper*, and *Green Ochre of Copper*.

When this ore of calciform Copper is mixed with extraneous substances, among which the most general is argillaceous earth, it takes the name of *Mountain Blue* or *Mountain Green*, and is also known in Painting by the name of *Sanders Blue* or *Green*.

All these Ochres are of great use in Painting; but cannot be used, until they have been well purified.

BROWN PINK.

AMONG the different species of *natural* Brown Pink, there are some that contain a

great deal of Asphaltum or *Bitumen of Judea*, and are entirely combustible. Others have their basis of Umber united with a vegetable tincture, which, being burnt, leaves only the aforesaid earth, a little changed by the ashes of the vegetable substance.

The *artificial* Brown Pink may be composed in different ways.

Boil with water, in a tin vessel, Buckthorn berries, chips of fustick wood and Tartar ashes; filter this tincture whilst it is boiling; and pour in to it, little by little, while the liquor is fermenting, a solution of Alum mixed with Cuttle fish bones dissolved in Aqua Fortis; wash the sediment, and filter it through blotting paper; afterwards let it dry upon a board.

ANOTHER MANNER. Boil a certain quantity of Buckthorn berries in water; filter the tincture through a bag; then grind

grind with water, and reduce to an impalpable powder, upon Marble, the interior part of the Cuttle fish bones; add to this powder the tincture, and evaporate it in *Balneo mare*, until it has acquired consistency: then grind it again and dry it.

BROWNS

BROWNS.

UMBER, COLOGNE *and* CASSEL EARTHS.

THERE are three kinds of Umber, one a dark brown with a reddish cast, properly called *burnt Umber*; the second of a very deep brown, called *Cologn Earth*, and the third of a tone between the two, but rather bordering on the darkest; this is *Cassel Earth*, most generally called *Vandyke Brown*.

UMBER.

THIS colour comes from the Levant, but more particularly from Egypt. It must be chosen soft and in large pieces; the smoke arising from it is very offensive and

and hurtful. If calcined in an iron box, it becomes redder and of a better quality, and takes the name of *Burnt Umber*.

The *natural* Umber is light and absorbing; it imbibes a good deal of water and contracts in drying; a defect owing to its union with an argillaceous earth. Colours obtained by precipitation are free from this defect.

Some Oil Painters do not make use of this colour, because in drying it becomes *heavy*, and sometimes so dark as frequently to make a spot; it often cracks, particularly when used alone.

The *artificial* Umber is not subject to these inconveniences. Its colour is the same as that produced by nature; it undergoes the same change by the fire, and is in every respect preferable.

It is obtained by iron dissolved in Acids and precipitated by Alkalies.

COLOGN

COLOGN EARTH.

THE species of Umber, called *Cologn Earth*, because procured from that place, is an infinitely deeper colour than the preceding Brown. Its basis is notwithstanding the same, and from the experiments made by Mr. Ferriere, may be considered as a species of Peat composed of the waste of vegetables, and united with the foregoing earth. It must be chosen soft, friable, very clean and in large pieces; it feels greasy and diffuses a bituminous, fœtid, and unpleasant smell.

CASSEL EARTH, *or* VANDYKE BROWN.

THE Cassel Earth is of the same nature, as that of Cologn and its basis the same. The celebrated Vandyke held it in high estima-

estimation, and from that circumstance it takes his name.

All these earths are of the greatest use in Painting.

BROWN RED.

Brown Red is an argillaceous iron ore, known by the name of *Bole*, or *Bolaire earth*. There is some naturally Red, as the Bole Armeniac; others are Yellow and made Red by torrefaction. *English Red*, or *Biauty* is of this number. The greatest part comes from Berry, a province in France, and is sold in Holland by the name of *English Red*. This colour is of great use either in Oil Painting, or in Water Colours.

BISTER.

This colour is generally made with soot; but the best materials for Bister, is the

the bituminous part of soot, found strongly attached to the wall of chimnies. That produced by a hard wood, is to be preferred.

This colour is prepared in different ways; the following are the two principal ones.

1st. Take some soot and grind it with child's urine, upon a shell, until it is perfectly refined; then put it into a glass vessel, that has a large mouth, filled with clear water; stir the mixture with a wooden spatula, and let it settle for about half an hour; the coarsest part will fall to the bottom; the liquor is then carefully poured into another vessel; the sediment is the most inferior Bister and is thrown away. The same operation must be repeated with that which remains in the second vessel; it is then emptied into a third, and after letting it remain for three or four days, you procure the finest Bister.

2nd. Take

2d. Take some soot and boil it five or six times, in a vessel exposed to a great degree of heat, (use as much water as you find necessary); stir it now and then, with a small stick; let it settle for about half an hour, at the end of which the coarsest part will sink: then pour off the liquor, and continue to repeat the before mentioned operation.

Bister is generally used to produce earthy tints. By mixing it with Carmine, Gamboge, and Indian Ink, a very fine tint is produced; it loses by that means its rawness, and becomes more easy to use.

Many of those who manufacture Colours, add to their Bister the juice of Spanish liquorice; this mixture produces a richer tone and does not injure the colour; but it will not stand.

CALCINED VITRIOL.

Martial Vitriol calcined by fire, which then takes the name of *Burnt Vitriol*,

triol, succeeds extremely well for Painting in Fresco, when it is well ground with spirits of wine. It produces a Red little inferior to Lake. This colour is particularly adapted to prepare those parts you wish to colour with Cinnabar. Draperies painted upon plaster, with these two colours, may vie with those painted in Oil with fine Lake.

GREENS.

MALACHITE, *and* MOUNTAIN GREEN.

In the article *Ochre*, an account has been given of this colour. It varies in shades, being sometimes light, sometimes dark, and also differs in its consistency and form.

It is said that Hungary furnishes the finest. It is frequently found united with calcareous earth, which, in acids, will effervesce. Fire generally deprives it of its colours.

Mountain Green is used in Painting.

SANDERS GREEN.

This name has been given to a substance, that is a real Copper Ore, of a

Green more or less dark, and known, when pure, by the name of *Malachite*, and of *Mountain Green*, when earthy.

GREEN VERDITER.

To make this colour, take some chalk; wash it with great care until it is sufficiently fine; then, throw it, little by little, into a solution of copper, until it has ceased to ferment, or till the liquor has lost its colour. The lees being precipitated, pour off the water gently, and continue to add the solution and to wash it, until the water remains insipid and the sediment without acrimony; afterwards filter it through blotting paper covered with linen, and then dry it in small pieces. This colour, as may be seen, is only a *factitious* Mountain Green.

The solution of copper is made by putting copper-shavings into Aqua Fortis.

PRUSSIAN GREEN.

To make Prussian Green, take three parts of Prussian Blue newly made and before it is formed into a hard cake, and one part of Dutch Pink; mix them well together and grind them very fine; after which, separate it in small quantities, and leave it upon paper to dry. This makes an excellent Brown Green, very useful in the shadows.

To make another Prussian Green, proceed exactly in the same manner as to make Prussian Blue, till the solution of Alum and Vitriol be mixed with that of Tartar ashes, and Sulphur of Charcoal, and till the green sediment be precipitated. Then wash the sediment which is Prussian Green, without adding any thing to it, and let it dry in the same manner as the Blue.

Prussian

Prussian Green ought to be deep and brilliant.

AZUR GREEN.

To make Azur Green, reduce *Armenus Lapis* to a fine powder; put it in Brandy or distilled vinegar; let it concoct on hot ashes, or in *Balneo mare*, till the liquor be entirely impregnated with the colour of the *Lapis*; pour off the water gently. Should there still remain any colour in the *Lapis*, steep it in fresh vinegar as at first. After this, throw away the stone and let the vinegar, impregnated with the colour, evaporate over ashes gently heated. The Green will be found at the bottom of the vessel. It must be cleaned and washed in cold water and then dried. This colour produces a fine effect in Painting and does not change.

Armenus Lapis is a *Quartzous* stone, of

a deep or pale Blue, coloured by copper to a calciform state. This stone has often been taken for *Lapis Lazuli*, but is totally different. Generally some of its parts partake of a Green tint. Whenever this is perceived, it will effectually prevent its being confounded with the true *Lapis Lazuli*, which is never found in this state. When this stone is very much impregnated with copper, by pulverizing it, you may extract a blue powder; but this is inferior to Lapis Lazuli or Ultramarine. Calcination destroys the colour.

VER - DE - GREASE.

By Verd-de-grease, is understood a Green substance found upon copper vessels, or such that are partly made of that metal. It is a calx of copper, that almost all aqueous, oily, acid, and saline dissolvents attack.

Ver-

Ver-de-grease that is used for dying and painting, and which is chiefly procured from Montpellier and its environs, is made with very thin and light plates of copper, well polished, and brought from Sweden. You first bury them for three or four days in Ver-de-grease; then, range them in earthen pots, prepared for this purpose, with wine or with grapes prepared also for the same purpose; leave them in this state four or five days; they will turn Green. When you perceive little white specks, take them out and leave them to dry; then steep them again in wine and let them dry; this must be done several times. At last, this dissolved substance will swell, spread, and form a species of moss, even and green, which you carefully scrape with a blunt knife: this moss is called Ver-de-grease. When the plates of copper are dipt in water instead of wine, the Ver-de-grease becomes more moist, heavier, less coloured, and inferior to the other.

DISTILLED VER-DE-GREASE.

CHYSTALS drawn from an impregnated tincture of common Ver-de-grease, made in spirits of vinegar, filtered, evaporated, and crystalized, is what is commonly called distilled Ver-de-grease. This colour is often used in Painting; but it turns black.

Common Ver-de-grease is used equally with *distilled*, for the purpose of colouring prints, paper, &c.

It is made by dissolving Ver-de-grease in a solution of crystal of Tartar, made with distilled, or rain water. This solution perfectly dissolves Ver-de-grease. These two solutions, colour paper extremely well, and give it, when dry, a shining appearance which adds to its brilliancy.

IRIS

IRIS GREEN.

Iris Green is a species of Green extracted from the flower of the Blue Iris, and is used for Miniature Painting. This delicate colour may be made in the following manner:

Gather before sun rise, some of the finest flowers of the Iris; separate and only make use of the exterior part which is green and satin like; pound it in a glass mortar, and pour upon it several spoonfuls of water, in which a little gum and alum has been steeped; grind it well together, till you find it is of the proper colour, and has the necessary consistency; strain this juice through thick linen; put it in shells and let it dry in the shade.

Iris Green may be made in many different ways; but this will be sufficient to give an idea of its composition.

SAP GREEN.

Sap Green is a hard paste made with buck-thorn berries.

To make this paste, bruise the berries, when black and perfectly ripe; the juice extracted is black and glutinous; then let it evaporate over a gentle fire, without its having depurated, and add to it a little Rock-alum dissolved in water, in order to make it of a deeper and more brilliant colour; let it remain upon a gentle fire till it has acquired the consistency of honey. Then put it in Oxen's or Pig's bladders, and suspend it in a chimney, or any other warm place. Leave it to harden for keeping.

When you want Sap-Green, make choice of that which is hard, compact, heavy, of a Green colour, bordering on Brown or Black, outwardly shining, and which when broken

broken or pulverized, becomes entirely Green, and of a sweet taste.

This colour is used with success for Painting in Gouache, and for other kinds of Painting in water colours.

Buck-thorn is a bush very common in the temperate countries of Europe. It grows in hedges and bears a fruit, or soft berry, about the bigness of a pea, filled with a greenish black juice. The small buckthorn berry, or *grain d'Avignon*, is the fruit of a bush very common in Provence. It is likewise used to make Dutch Pink, a colour used in Oil Painting, and Water Colours.

BLUES.

BLUES.

Smalt.

SMALT is a substance composed of calcined Cobalt, pulverised and mixed with a *Fritt of Quartz*, sand or flint, and vitrified by a reverberating fire. Smalt ground and washed makes what is called *Azur*.

With the Ore of Cobalt you make *Zaffre*, which is nothing more than the calx of this metal, deprived of its mineral qualities, and mixed with an equal quantity of pulverized flint. With Zaffre you make *Smalt*, by vitrifying it in the before mentioned manner. This, when pulverised and washed, becomes *Cobalt Blue*.

This

This colour is not used for Miniature.

Cobalt is a semi-metal, with which you make *Azur*, or *Enamel Blue*.

Having purified the Ore of Cobalt of its mineral qualities and reduced it to a black powder, which is its pure calx, you mix with it an equal quantity of *Quartz*, sand, or vitrificable flint reduced to powder; sprinkle this mixture with water; it hardens and takes the name of *Zaffre*.

Take some of this Zaffre, to which add a little fixed Alkali; put it in a crucible, and let it sustain the heat of a reverberating fire, for about the space of nine hours; it becomes vitrified, and is then called *Smalt*.

Pass the same substance through a Mill, standing in a large tub of water; then wash the powder and pass it through a sieve. It is this powder that takes the name of *fine Azur*, or *Enamel Blue*.

There are many different species of Cobalt,

balt. That which in Spirits of Nitre gives a red solution, is that from which the finest Blue is extracted. In proportion as the solution is of a finer Red, the Blue extracted will be more brilliant.

VIOLET BLUE.

This colour is composed of Tartar, Flint, and the pure calx of Cobalt, pulverised and melted together, and quenched in water. It is afterwards melted again, and the same operation repeated several times. It would be well to calcine this mixture, day and night for forty-eight hours, in a glass-house furnace. By this means, you will be assured of the beauty of the colour.

Violet Blue may be imitated by mixing Lake, Prussian Blue, and Carmine.

ENAMEL

ENAMEL BLUE.

This colour of the greatest use to Enamellers, cannot be used with success in Miniature. It is composed of the Fritt, or substance of which Enamel is made, and of Zaffre reduced to powder, which is nothing more than the pure calx of Cobalt. The whole must be properly mixed, melted several times, and poured each time in clean water to purify it.

AZUR OF COPPER, OR MOUNTAIN BLUE.

We have already said in the article *Ochre*, that calx of Copper, whether Blue or Green, in a state more or less pure, is a natural production. When the *Blue* is pure, it is found either in small crystals, or irregular

irregular masses of various sizes, and then takes the name of *Azur of Copper*; it takes that of *Azur* or *Mountain Blue*, when united with earthy substances. In proportion as the earthy substance predominates over the calx of Copper, the Blue is lighter. Sometimes the calx of Copper, is united with *Quartz*; it then constitutes that substance called *Armenus Lapis*, as mentioned in the article *Azur Green*. This substance is lighter, more tender, and brittle than the *Lapis Lazuli*, and its colour will not stand fire.

In order to use Mountain Blue, you must grind and wash it, and separate the little stones that are sometimes mixed with it.

SANDERS BLUE.

This name is given to an Ore of Copper, known by the name of *Azur of Copper*,

per when pure, and *Mountain Blue*, when mixed with an earthy substance. If you wish to have this colour very fine, you must grind it with water—it will be found of great use in Water Colours. This beautiful and vivid colour is most generally used for painting the decorations of theatres. It cannot be used for Oil, because it blackens.

If you wish to compose a Green, do not mix Sanders Blue with Yellow Orpiment; these two colours blacken when mixed together.

This colour will sometimes be found nearly as beautiful as Ultramarine; but by mixing it with Oil, you easily discover the difference.

ULTRAMARINE.

The basis of this colour is *Lapis Lazuli*. This, added to the long and tedious ope-

 ration

ration of extracting the Blue, makes this colour very dear.

In order to prove the goodness of *Lapis Lazuli*, make it red hot upon a plate of iron; and then throw it immediately into strong white Vinegar. If it loses its colour, it is of an inferior quality. You may likewise form a judgment by its weight, the real Ultramarine being much heavier than the false.

Lapis Lazuli is a species of rocky stone, hard, heavy, and of a brilliant Blue, more or less deep; it is very expensive—chuse that which is most free from white streaks, and of a Blue fixt and brilliant.

It is very probable the colour extracted from this substance, is owing to a modification of Iron, which is yet unknown to us, and is different from that which produces Prussian Blue. At least the only Analysis which has yet been made, we owe to Klaprotte, who gives three-100ths of Iron,

Iron, and no other substance can be considered as producing the same colour.

This stone comes from Asia; it is found on the frontiers of Tartary, China, and America, and is brought to us in pieces of various forms and sizes.

The tomb of Constantine, which is still to be seen at Rome, is surrounded with pillars of Lapis Lazuli, of which the base and capitals are Bronze. The Blue extracted from this stone is called *Ultramarine*. It is of the most beautiful colour, and does not change either by fire or air. It is of the greatest use in Painting, and unites perfectly with all the other colours—in Miniature Painting its use is as indispensable as it is agreeable.

ANTWERP BLUE.

This colour is made with Green Copperas, or Vitriol of Copper, pulverized Kali, and Sulphurous Acid.

Dissolve some Green Copperas in cold water, and at the same time throw some pulverized Kali in water—stir it a great deal and leave it to settle; then, by degrees pour the Kali water into the dissolved Copperas, until the mixture becomes a little thick; afterwards filter and wash the Precipitate, whose surface, when exposed to the air, exhibits various changes that are very singular. Then pour upon it, little at a time, Sulphuric Acid that has been steeped in water—in an instant the Precipitate, which was a mixture of Grey, Green, and Rust Colour, dissolves and changes to a fine Blue, which is precipitated at the end of a few hours, and being

being well washed forms a Blue of great intenseness.

PRUSSIAN BLUE.

The Prussian Blue is a particular modification of Iron, the nature of which Chymists have not yet ascertained. It is usually obtained by a precipitation of this metal, through the medium of a lixivium of blood.

To make this Blue, first prepare a lixivium of blood, which is done by burning in a Crucible one part of Tartar Alkali to two of dried blood; preserve this mixture in a state of incandescence for a quarter of an hour—afterwards throw it into distilled water, and filter the solution. This lixivium being prepared, is of a Yellowish Green. If you wish to make Prussian Blue, dissolve in clean water one part of

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Martial Vitriol to three of Alum, and pour it into the lixivium. This mixture becomes of a reddish Brown, and exhales a vapour of Liver of Sulphur; when filtered, it leaves a sediment whose surface is Blue, and the centre of a yellowish Green; but as soon as the surface comes in contact with the air, it becomes Green, and then changes to a fine Blue.

Some Artists dissolve the Alum and Martial Vitriol in boiling water, and add Spirit of Salt to enliven the colour.

This colour is of great use in Oil Painting and difficult to use in Water Colours, because in drying all the particles reunite, even after having been well ground upon Porphyry; to remedy this inconvenience always keep it liquid with distilled vinegar.

The Iron in this colour always tends to regenerate and turn black; for this reason, to paint Water Colours, Indian Blue should be preferred for the Sky, Waters, and distances.

From

From the same cause, Greens composed with this colour, blacken by time.

Those who paint upon silk and ribbons use Prussian Blue dissolved in Spirit of Salt.

INDIAN BLUE AND INDIGO.

Indian Blue is made of the leaves of the *Anil* or *Indigo*, a plant which grows in the East and West Indies, and which under the administration of Mr. Poivre greatly enriched the Island of Bourbon.

You steep the leaves in water for two days; then separate the water, which is of a faint greenish Blue: beat this water for about two hours with a battledore, and leave off as soon as it begins to froth. Then sprinkle it with a little Olive Oil; you will perceive the colour separate from the water by little clots or lumps; the

water having stood for some time, will become clear, and a species of lees will be found at the bottom of the vessel; pour off the water, and let the colour dry in the Sun.

Indigo is made in the same manner as the Indian Blue, except for the latter you make choice of the youngest and finest leaves, and for the Indigo you use the remainder of the plant.

Indian Blue may be used for Oil Painting—when mixed with White it acquires body, but in drying it grows faint and loses great part of its force. This is the reason why Painters, when they use it for Draperies, are obliged to glaze it with Ultramarine.

You distinguish the good Indigo from the bad by mixing it with pounded slate, or sand. In this state, if put upon a red hot shovel, the good will entirely burn away. It is light, and in water floats upon the surface;

surface; when broken in pieces, the water will appear of a fine deep Blue, bordering upon Violet.

That called *Guatimalo* is greatly esteemed, and also *Serquisse Indigo*. In Water Colours, the Indian Blue produces a fine effect, and is absolutely necessary for the Sky, Water, and distant parts of the Picture.

In general it is advisable to use it in preference to Prussian Blue—the reason has been given in the last Article.

Most Greens ought to be composed of Indigo and more or less of different Yellows. These Greens will be less liable to change than those made with Prussian Blue.

SUN-

SUN-FLOWER BLUE.

Sun-flower Blue is a paste made with the fruit of a plant called *Heliotropium Tricoccon*, that grows in gardens in France. This paste being steeped in water takes a beautiful blue tint. It will sometimes appear of a Red colour; but by adding a little Lime Water, it will return to its Blue colour.

This Blue may be used in Water Colours, but flies very soon, as do all colours extracted from vegetable substances.

A FINE BLUE.

A fine Blue may be extracted from the flowers of the Blue-Bottle, which are found in abundance in most corn fields.

The

The exterior petals of this flower are of a light Blue, the inside of the flower dark; you may make use of both; but the latter produces the finest colour. They must be separated from the leaves the same day they are gathered, or at least very soon after. Having a sufficient quantity, extract from them as much juice as you can, and add to it a little Alum. This process will furnish a transparent Blue of a brilliant colour, and little inferior to Ultramarine.

PURPLES.

PURPLES.

Purple.

IN most parts of Europe the different shades of Purple are made with Cochineal and Woad. This Purple is the least expensive and the most brilliant.

Purple is extracted from a species of shell-fish found in different seas, but principally on the coasts of France; this colour consists of a liquor contained in a reservoir found on the neck of the fish.

With Prussian Blue and Lake you may compose a Purple generally used in Painting.

PRECIPITATE OF GOLD, *Or*, OF CASSIUS.

The Precipitate of Gold, discovered by Cassius, whose name it bears, is composed of

of a solution of Tin and a solution of Gold of *twenty-four carats.*

The solution of Gold is made in *Aqua Regis*, composed of three parts Spirit of Nitre and one of Spirit of Salt. The solution may be accelerated by the heat of a sand bath.

The solution of Tin is made with Aqua Regis, composed of two parts Spirit of Nitre and one of Spirit of Salt, diluted with an equal weight of distilled water—dissolve small pieces of Tin of Melac, the whole without the assistance of heat: pour off the Aqua Regis, as soon as it has acquired a colour sufficiently Yellow, and when it has ceased to act upon the Tin.

Pour the solution of Tin in a great quantity of distilled water: take a little of this, and add to it about half the quantity of solution of Gold—stir the mixture well, and in a short time will be produced a

Red of the colour of Port Wine. In the course of a little time a sediment is formed of the same colour, and the surface of the liquor becomes lighter: when it is very pale, pour it off gently, and in order to wash it well, add to it several times distilled water. The residue is the Precipitate of Cassius.

This valuable preparation is very delicate, and in some measure capricious, and requires to be made with great precaution; it would be well to make several trials of the solutions.

As it is the Gold, and not the Tin, that gives the Purple colour, a Precipitate containing the most Gold will give the finest Purple. To procure a fine colour, the best way would be to mix a solution of Gold with a small quantity of solution of Tin, each containing an excess of Acid, that they may not be mutually precipitated. Afterwards precipitate it

with fixed Akali; wash the sediment and calcine it under the mouffle of a coppel furnace, with an heat not sufficient to melt Gold.

This colour is solid, and very useful to Enamel Painters.

With Burnt Carmine you may imitate this colour.

A solution of Tin in Aqua Regis, mixed with a tincture of Cochineal, Gum, Lake, and other Red tinctures, increases so much the beauty of the colour, that the tints, naturally Crimson or Purple, become a most brilliant and vivid Scarlet: it is only of use for Woollen, or other animal substances.

The Tin tends to develop the Purple, in the solution of Gold made with Aqua Regis for Enamel Painters.

REDS.

CARMINE.

CARMINE, a sediment of a brilliant and vivid Red, bordering upon Crimson, may be composed in the following manner:

Take five drachms of Cochineal, half a drachm of *Grains de Chouan*, eighteen grains of Haw-rind, eighteen grains of Alum, and five pounds of Rain Water; boil the water, and throw in the Grain of Chouan—let it boil five or six times, and filter it; then put it again on the fire; when it has boiled put in Cochineal. Having boiled five or six times more, add the Haw-rind and Alum, and filter the liquor; in a short time the Carmine will be precipitated; pour off the liquor and dry the colour

colour in the Sun. The articles above-mentioned will give about two scruples.

It may be prepared in many different ways, but the one we have mentioned will be sufficient to give an idea of its composition.

It is very much used for Miniature Painting. This delicate colour, so friendly to the eye, so calculated to express the faint and imperceptible colours of Carnation, is at the toilet more particularly admired.

Cochineal is a substance brought from Mexico in small grains, convex and fluted on one side, and concave on the other. It is nothing more than an insect resembling a bug, that settles in the leaves of the *Raquette*, and is gathered and dried by the Indians.

These grains when dried may be preserved for a hundred years, without losing their colouring property.

Cochineal is likewise used in dying Scarlet and Crimson.

LADIES ROUGE.

It is not to be expected that in this Article will be given the complete History of Paints and other Cosmetics, that have been and still are used; it will be sufficient to make some few remarks upon this subject.

The idea men have formed of beauty not being every where alike, in order to produce the same effect, it was found necessary to make use of various methods; hence has arisen the varied and fantastick manner in which savage Nations have been accustomed to paint not only their faces, but frequently different parts of the body, according to their different ideas of beauty.

The works of the learned traveller and English Chymist Shaw, those of Gabriel

briel Sionita, and Mr. Marvieux, are filled with curious remarks upon the custom of Painting, that so universally prevails in different nations.

The love of beauty has devised, from time immemorial, all the different methods most calculated to perpetuate its continuance, to heighten its brilliancy, or to repair the outrages of time. Cleopatra, the famous Queen of Egypt, who captivated by her beauty Pompey, Cæsar, and Antonine, in addition to her natural charms, made use of all the assistance of art to augment them. It will be unnecessary to mention the number of celebrated women whose charms have been preserved by the use of Cosmetics; it will be sufficient to remark that the Greek and Roman Ladies derived the custom of Painting from the Asiatics—that they made considerable progress in this Art and invented two Paints which have passed

down to us, namely the White and Red. From thence the Poets have attributed the whiteness of the European to some Paint stolen from Juno by one of the daughters of that Goddess, and presented to the daughter of Agenor. In proportion to the wealth, the luxury of Rome increased by degrees—gallantry introduced the most refined researches, and as this Art became more general, it acquired greater perfection.

The Greek and Roman Ladies made use of a *White* metallic preparation, which was nothing more than Curuse, or White Lead, still used for the toilet. This preparation is as permicious to the health, as contrary to the end for which used.—Their *Red* was a vegetable extracted from a root called *Rizion*. Afterwards for their *White*, they used a species of Argentine Talc, and for their *Red* a species of Vermilion prepared and called *Purpurissus*, a beautiful

beautiful colour of a Red Purple cast, whose composition and appearance resembled Carnation Red, or Rose Pink. It was made with the finest species of White Talc, pulverized and coloured with a strong Purple Tincture, taken, when hot, from the scum of a fish called *Purpura* or *Murex*, a species of shell-fish caught in the Mediterranean Sea on the French coast. The liquor was the same as used by the Ancients for dying their celebrated Purples, particularly those of Tyr and Sidon.

We will not take upon ourselves to decide, whether the Paints made use of at present, are more or less inconvenient than those used by the Ancients; we will only observe, the Art consists in using them with moderation.

Some Paints are dangerous, and far from preserving beauty, spoil and wrinkle the skin, and destroy the natural colour. Those Ladies, for example, who

make use of White Lead, or Oil of Talc, supposing them innocent, are greatly mistaken—those who use sublimated preparations, do a still greater injury to their health. Likewise the continual and exaggerated application of Vermilion, bought and used without being examined, and which turns every thing Yellow, must be prejudicial. In short, Ladies cannot be too careful to avoid all Paints extracted from mineral, and particularly metallic substances.

A fine Red is commonly made by calcining a species of Talc, known by the name of *Chalk of Briançon.* When reduced to an impalpable powder mix with it Carmine, in proportion to the tone of colour you wish. But we cannot recommend this Paint, Talc or any mineral or metallic substances, being, as we before mentioned, always dangerous.

Fine Carmine, pulverized and prepared

for

for this purpose, is without doubt the best of all Paints, and which the Ladies ought to adopt. In order to use it in an agreeable and frugal manner, procure some fine pomatum, without scent, made with the fat of pork and white wax; take about the bigness of a pea of this pomatum, and lay it upon a piece of white paper; then with the end of a tooth-pick add to it about the bigness of a pin's head of Carmine—mix it gently with your finger, and when you have produced the tone you wish, rub in it a little compressed cotton, and pass it on the face, till the Paint is quite spread and it no longer feels greasy.

Ladies have nothing to fear from this œconomical Rouge—it neither injures the health or skin, and imitates perfectly the natural colour.

CROCUS MARTIS.

This colour is obtained in different ways, but always with a dissolution of Iron that is afterwards precipitated.

This colour may be made by calcining Mars Yellow, in the same manner as *burnt* Terra de Sienna is obtained from the *Raw* Sienna. It then becomes dearer than that usually sold at the shops, but it is lighter, more transparent, and more pleasant to use. This colour is easy to work with, and unites perfectly with all others.

You may obtain from all Martial Ochres, a Red more or less deep, by exposing them to the fire; but the quality is greatly inferior to that obtained from Martial Vitriol.

MINIUM.

MINIUM.

MINIUM is a calx of Lead, of a very brilliant Red, always bordering upon Yellow. It is likewise called Vermilion, and is a colour very useful in Painting.

To make Minium, take Ceruse; put it in a reverberating furnace, and place it in such a direction, that the flame may just touch it. The heat, at first, must be moderate, and then be suddenly augmented. When changed to a Grey Powder, then let the degree of heat be sufficient almost to melt it. When of a fine Red, take it out.

As the calx of Lead is very fusible, great care must be taken that the heat is not too violent; it will otherwise vitrify and become *Litharge*. This operation may be done with more certainty by letting

ting the degree of heat be regular, not much exceeding 120 degrees of Reaumur's Thermometer, and 270 of Farenheit's. You must also take care that during the time of calcination, it does not come in contact with the air; the Minium could not then be formed. It suffices in this case to put the Potsherd to calcine at the bottom of the mouffle. In the same instant the Massicott changes to Minium, in the same manner as Minium returns to the state of Massicott, if the Potsherd is taken out at the entrance of the mouffle.

Minium may likewise be made by melting Lead into a calx, or Grey Powder, which is perpetually forming on the surface. When the Lead is entirely reduced to a calx, grind it into a very fine powder and put it into a reverberating furnace for two or three days; stir it continually with an iron rod, until it has acquired the pro-

per colour, and be very careful that the heat is not too violent.

CINNABAR, OR VERMILION.

Natural Cinnabar is a common Ore of Mercury combined with Sulphur. It is found in Hungary, Bohemia, and in great abundance in Corinthia, and in the principality of Deux-Ponts. Cinnabar is compact, and generally of a brick-dust colour, seldom very vivid. If reduced to powder, it loses its brilliancy and appears like Carmine; it then takes the name of Vermilion.

You may prove whether the Cinnabar is good, by observing the colour of its flame; when put upon red hot ashes, if the colour is Blue, bordering upon Violet and without smell, it is of a good quality.

By *artificial Cinnabar* is understood a mixture of Mercury and Sulphur, sublimated

mated by fire. This substance ought to be of a fine deep Red, disposed in long shining strias. The *factitious Cinnabar* is more pure and to be preferred, to that which is *natural.* When reduced to powder, it is of great use in Painting, and known by the name of *Vermilion.*

Vermilion is therefore nothing more than Cinnabar ground with water, on Porphyry. By this means, it loses its intensity of colour; and, owing to the extreme separation of its particles, becomes a very brilliant Red. When thus ground, dilute it in a great quantity of water, and after letting the powder settle an instant, pour off the water, while it is yet troubled. By this means the fine Cinnabar is separated from the coarser particles that may have escaped the muller; let the water settle, pour it off and then dry the powder, which is called *Vermilion.* The coarse powder is afterwards ground, and the same operation repeated.

If

If you wish to purify Cinnabar, grind powdered Vermilion upon Porphyry with child's Urine or Brandy, and let it dry in the shade. To give it a lighter tone, infuse in the mixture a little Saffron.

Vermilion may likewise be made by mixing powdered Cochineal with Burnt Alum; then quench them in Plantain or Rose Water. This is one of the finest Vermilions that can be made.

Chinese Vermilion is superior to all other; but yet it is apt to blacken.

SATURNINE RED.

This colour is prepared nearly in the same manner as Minium, but it requires to be afterwards washed in large vessels of distilled water. This water must be changed every forty-four hours, till the surface is quite free from extraneous matter,

ter, and the colour ceases to blacken at the edge of the vessel. This operation is tedious and expensive, owing to the great quantity of distilled water.

When Saturnine Red is perfectly well prepared and purified with Spirits of Wine, it may be used for every manner of Painting.

LAKE.

Lake, of which the true origin was for a long time unknown, is certainly a species of Wax, either found in its natural state upon flowers or trees, or wrought by a sort of Flying Ant, common in many provinces of the East Indies, as Pegu, Siam, Bengal, and Malabar. The cells of this Wax contain small bodies, more or less swelled, which in all probability, are the eggs of these Ants—they are of a fine

fine Red, more or less deep. When bruised, they are reduced to a powder as beautiful as Cochineal. By putting these small bodies in water, they will swell in the same manner as Cochineal, will tint it of a colour equally beautiful, and in appearance will be almost the same. These small bodies are the colouring part of Lake; for, if entirely divested, or in a small proportion, the colour would be extremely faint.

The Lake is separated from the wax or sticks by melting. Afterwards, it is washed and then spread upon a marble, where it will grow cold in drops. It then takes the name of *flat Lake.*

The *Lake in grains* is the remains, or coarser parts, which are left, after having drawn off the tincture. This Lake is used for certain varnishes, and also for *Sealing Wax.*

The name of *Lake* is likewise given to Alum-

Alum-Earth, impregnated with a colouring principle extracted from different plants, or Lees of plants.

The general way of making it, is to bake coloured vegetable substances with Alum, and to precipitate the tincture with fixed Alkali, or to colour Alum-Earth, newly precipitated.

To produce the finest Lake, precipitate the tincture by means of a solution of tin.

Florentine, or *Chinese*, and all *Red* Lakes of a solid colour are extracted from Cochineal, Kermes, or Madder. For artificial Lakes they use Brazil and Fernambouc Wood.

The Lake the least liable to change, is that extracted from Madder.

To make this Lake take Roman Alum; when it boils, add some Madder coarsely pulverized—then boil it several times, and when cold, filter it through a cloth; afterwards heat it sufficiently to take off the

chill, and precipitate it with a solution of vegetable fixed Alkali, after which it is washed and dried.

To make Lake with Cochineal, take five ounces of Alum, half an ounce of Cochineal, and boil it with a sufficient quantity of water; filter the liquor, and pour into it some drops of solution of tin; then mix with it fixed liquid Alkali; the Alkali discomposes the Alum and precipitates the Earth—this Earth in precipitating, collects and unites with the Red colour; filter the liquor. When the precipitate is formed, throw away the liquor, and in order to extract the salt, wash the precipitate, and then let it dry.

You may in like manner prepare all the different species of Lake, and, if thought necessary, omit the solution of Tin.

DRAGON'S BLOOD.

This colour is a dry, resinous, and inflammable substance; it melts in fire, and is of a deep Red—the colour of Blood. Dragon's Blood is a juice that flows from a tree that grows in the Canaries, Java, and Batavia; it is brought to us in Red drops, enveloped in leaves, resembling rush and palm leaves. There is also some in masses, but this sort is not so pure, being mixed with extraneous substances.

Dragon's Blood, like all other Rosins, will not dissolve in water, and oily substances. It is a necessary ingredient in Red Varnish.

This colour is useful for all manner of Painting. It is less subject than others to be injured by the air of sulphurous vapours,

INDIAN

INDIAN RED.

The true Indian Red, which is also called *Persian Earth*, is a species of Red Martial Ochre, brought from the Isle of Ormus, in the Gulph of Persia. It is friable and of a high colour. When this Ochre is well prepared, it makes a fine Red, much used in Painting.

To prove whether Indian Red is pure, heat it by the fire; if factitious, it will immediately change its colour.

Common Indian Red may be made with the *Caput Mortuum*, or Ochre, found in iron pots after the distillation of Nitre and Vitriol, in the manufacture of Nitrous Acid, and with the *Caput Mortuum, or Colcothar*, which remains in the Retort, after the distillation of Martial Vitriol, in

the manufacture of Oil of Vitriol. Break these pieces, and infuse them in a large quantity of water; leave it two days, and shake it frequently; afterwards pour off the water and add more—repeat the same operation, until the salt is extracted, and the water appears clear: wash, filter, and dry the powder.

If you wish to use common Indian Red in delicate Painting, you must wash it thoroughly in distilled water.

BLACKS.

BLACKS.

Ivory Black.

This colour is made with pieces of Ivory put in a crucible, or pot, well luted with potter's clay, and put in their oven while they bake their ware. For the Ivory to be perfectly Black, it must remain in the oven as long as the earthen vessels. Take particular care that the vessel is hermetically closed; otherwise the Ivory instead of blackening, will consume and whiten.

This Black mixed with White, makes a beautiful Grey, much used in Painting.

LAMP BLACK.

This name is given to a fine Black substance, produced by the smoke of burnt rosins.

All resinous substances, such as Rosin of Pines, Firs, Pitch, Bitumen, and Turpentine, being burnt, are reduced to a loose Carbonic substance, called *Lamp Black.*

In Germany, where the forests of pine and fir trees are very extensive, they make this Black in large quantities. The smoke attaches itself to cloths spread for this purpose; from thence it is shook off, and put into barrels for sale.

This Black is useful in Oil Painting, as it incorporates perfectly well with the oil. In Water Colours it cannot be used, because it will not unite with water.

BONE

BONE BLACK.

This is made with Mutton Bones, burnt in the same manner as the Ivory, before mentioned. It makes a Reddish Black, much used for Painting. It is a long time drying, and when you grind it with oil, it is necessary to use more force than with any other colour, in order to put, with more facility, the necessary quantity of fat or drying oil.

It is seldom used in Water Colours.

BLUE BLACK.

BLUE BLACK is very proper for Miniature, or small Landscapes. It is particularly used for Linen.

To make Blue Black, take the young branches and shoots of vines, or any other

wood of an acid taste and close texture; put it in a vessel that can bear fire, and cover it with a mixture of fat earth and sand, which you dry and make use of to stop all the crevices. Then place it in a potter's furnace, and let it remain there till calcined; after which, reduce it to an impalpable powder, and wash it several times.

PEACH BLACK.

PEACH BLACK is made with Peach stones, burnt in the same manner as Ivory Black, and ground upon Porphyry. It is much used for Portraits, and, when mixed with White, is of a blue cast. It may likewise be used for Water Colours.

STAG-

STAG-HORN BLACK.

STAG-HORN BLACK is what remains in the Retort after having extracted from Stag-horn Spirits, Sal Volatile and Oil. The residue, ground with water, is almost equal to Ivory Black, and may be used for Painting.

CHARCOAL BLACK.

This Colour is made with small pieces of Charcoal, well burnt, and pounded in a mortar; afterwards ground sufficiently fine upon Porphyry, and then dried in small pieces upon glossy paper.

This is a very good Black for Portraits, in oil, and equally so for Water Colours.

INDIAN

INDIAN INK.

INDIAN INK is commonly formed in small square sticks or cakes, upon which are engraven Chinese characters. It is an excellent Black for Water Colours. If you dip the end of one of these cakes in water and rub it against the bottom of a vessel, the water will dissolve part of the substance, and render it fit to colour the paper, either Brown, Grey, or of a deep Black.

Although the composition of Indian Ink has not been generally known, yet from the many experiments which have been made, it appears certain that it is composed of Lamp Black, and of a glutinous vegetable substance.

The good or bad quality of Indian Ink is owing to the quality of the Lamp Black;

Black ; the best is that which the Chinese extract from the Oil burnt in lamps for that purpose.

The scent of Indian Ink is owing to a little Musk that the Chinese add to the Gum Water, and which does not effect the Colour.

RO-

ROSINS.

COPAL.

THERE are two substances called *Copal*, distinguished by the name of *East* and *West India Copal*; the last is improperly called *Gum Copal*. It is brought from New Spain and the Antille Islands. It is a transparent and hard Rosin, which flows naturally, or is procured by incision, from a species of Sumack. It dissolves but imperfectly in Spirits of Wine, but will dissolve quickly by exposing it to a gentle heat in Native Turpentine.

Copal is shining, not very heavy, though heavier than water, commonly of a citron or gold colour, sometimes White or Brown, insipid, and without smell, except when heated.

Copal is much used for Varnish.

SANDARACK.

SANDARACK.

SANDARACK is a dry Rosin, of a penetrating and sweet smell. It flows from the Juniper tree, and is brought from the coast of Africa. Sandarack is used in the composition of some Varnishes. It gives consistency to paper, and prevents it from imbibing, when the surface has been erased or scraped.

GUMS.

GUMS.

Gum Arabick.

Gum Arabick comes from Egypt, Arabia, and the coast of Africa. It is a gummy juice which flows from the *Acacia Tree*. The best is White, or of a Pale Yellow, transparent, brilliant, and dry. It has neither smell nor taste; it will dissolve in water, but not in spirits of wine, or oil: If put in the fire it will not flame.

It is this Gum which most Painters use to unite their colours, when not sufficiently prepared. When used to excess, it destroys their brilliancy, and is apt to peal off. Nevertheless it is better than any other for this purpose.

GUM SENEGAL.

Gum Senegal resembles Gum Arabick; it is brought from the province of Negroeland, situated on the banks of the River Senegal. It is not known from what tree it flows, unless from a species of the Acacia. It possesses the same properties as Gum Arabick, and though not so White, is equally good for many colours.

GUM TRAGACANTH

Is a gummy juice, which flows from a tree called *Tragacantha*, that grows in the island of Crete, in Asia, and in Greece. It is sometimes found in long cylindric threads, resembling worms; sometimes in little White transparent lumps, of a Yellow or Black cast, dry and a little glutinous;

ous; the good one is in small threads, like Isinglass, and without dirt.

When analysed, its composition is found to be almost the same as Gum Arabick. It contains a little more acid-salt, less oil, and more earth. It neither dissolves in oil nor in spirits of wine. It is used to give body to powdry substances.

Miniature Painters make Vellum as smooth as Ivory, by varnishing it with this Gum. For this purpose, they put a a mucilage of this Gum in a linen rag, tie it up, and rub it upon the Vellum.

Gum Tragacanth is less supple than Gum Arabick, and of course not so proper to compose colours. It makes them more liable to peel, hardens, and renders them more apt to change.

CUTTLE-FISH

CUTTLE-FISH BONE

Is nothing more than a bone found upon the back of a fish bearing this name.

It is used for the same purpose as Pumice Stone, to polish and extract the grease from Ivory.

SPIRITS OF WINE.

SPIRITS OF WINE is a fluid, extremely light, volatile, penetrating, perfectly White, and limpid.

Spirits of Wine is free from carbonic, as well as from saline and earthy substances. It remains the same after being very often distilled, and does not appear sensibly to act either upon earths or metallic substances. It dulcorates and unites with all Acids, and is commonly looked upon as a dissolvent of oils, and oily substances; but, strictly speaking, it dissolves only balsams and rosins. Chymists do not agree upon the nature of Spirits of Wine; but whatever it may be, it is used with the greatest success for the purpose of purifying and preserving colours. It attracts and attaches to itself all substances extraneous to the colour, and preserves them in their purity.

DISTILLED

DISTILLED WATER.

To distill Water, you put it in a Copper Still; perfectly well tinned, very clean, and which is kept only for this purpose. It is best to throw away the first portions of water, and to cease the distillation as soon as two-thirds of the water have passed. By this means, it will be free from all extraneous matter. Distilled Water ought to be put in bottles perfectly clean, well rinsed with the same water, and corked with glass stoppers.

Distilled Water is found to possess the necessary degree of purity for colours, as much as it causes no change on Violets, and preserves its fluidity, even though some drops of Solution of Silver and Nitrous Acid be thrown into it.

It is absolutely necessary to prepare all

colours with Distilled Water; common water, however pure, is always more or less impregnated with saline or earthy particles, which must be injurious to colours, whose brilliancy cannot exist without the greatest purity, nor continues but as long as the air and all extraneous substances cease to act upon them.

THE

THE details here offered, will certainly appear too short to those who might wish to devote their time to the chymical operations necessary in the preparation of Colours; we, however, trust they will be found sufficient to answer the end proposed, that of giving to Students and Amateurs an idea of their Nature, Qualities and Composition—of the necessary preparation they require—the manner of using them in the various Modes of Painting—and, finally, to give the necessary indications to enable them to Paint well, and to reason upon their Works. We shall esteem ourselves happy, should this little Treatise be in the least useful to the Arts, and to those who from taste alone cultivate them—our wishes will be fulfilled, and we shall have received the most flattering recompence.

Knowing, from principle and experience, the many inconveniences arising

from the neglected or mistaken preparation of Colours, in the manufacture of which Private Interest has been more frequently consulted than that of the Art, we have endeavoured in our Manufactory to render them as pure, as unchangeable, and as solid as possible. Neither care nor expence has been spared to attain this end, so necessary and desirable. We have more particularly avoided using those preparations foreign to their nature, which, though they may require less care to use, will, in the end, destroy the brilliancy of their tints and cause them to crack and blacken, by which means the talents of the Painter are rendered fruitless. We flatter ourselves that experience will prove the truth of what we have advanced.

A LIST

A

LIST

OF THE

PRINCIPAL COLOURS

Sold at the Manufactory of Messrs. MASSOUL and Co. No. 136, New Bond-street.

Antwerp Blue
Azur Blue
Azur Green
Bister
Blue Black
Blue Verditer
Bone Black
Brown Lake
Brown Ochre
Brown Pink
Brown Red
Burnt Carmine
Burnt Sienna
Burnt Umber
Carmine
Carmined Lake
Calcined Vitriol
Carnation Red
Carbonic Black
Chinese Vermilion
Cologn Earth
Crocus Martis
Dragon's Blood
Dutch Pink
Enamel Blue
French Green
Gall Stone
Gamboge
Gum Arabick
Green Verditer

Green Lake
Green Earth
Indigo
Indian Ink
Indian Red
Iris Green
Ivory Black
Lake
Lamp Black
Light Lake
Light White
Mars Yellow
Massicott
Mummy
Mineral Green
Olive Green
Patent Yellow
Peach Black
Precipitate of Gold
Prussian Blue
Prussian Green
Purple
Red Ochre
Realgar, or
Red Orpiment
Rose Pink
Sanders Blue
Sanders Green
Sap Green
Saturnine Red
Sienna
Smalt
Stag-horn Black
Sun-flower Blue
Vandyke Brown
Ver-de-Grease
Vermilion
Violet Blue
Ultramarine (deep)
Ultramarine (light)
Varnish, for Glasses
to paint upon
Water Green
White Lead
White of Egg Shells
White of Pearls
White of Silver
White of Talc
White of Zinc
Yellow Ochre
Yellow Lake
Yellow Orpiment.

In this Manufactory all compounded Colours are prepared.

Colours require to be preserved with the greatest care, and to be sheltered from sulphurous and phlogistic vapours, by whose influence they are always liable to be injured, however pure and well prepared; this has induced us to enclose them in glass bottles.

The Colours for Oil Painting are in Powders, and prepared in such a manner as to be preserved for any length of time. When you wish to use them, put a little of the Powder on your Pallet with an Ivory-knife; add a drop of the Oil with which you mean to Paint—mix them with the knife, and in the course of two seconds your Colours will be properly prepared.

The Colours for Miniature are sold in Powders and little Pastills; put a little on the Pallet, and with a drop of Limpid Water, mix it in the before mentioned manner.

For

For Gouache, and other modes of Painting in Water Colours, the same Colours are used, with this difference, that Gum-water is used instead of Oil.

For Miniature you may also use the same Colours with Gum-water.

The glass bottles are enclosed in mahogany boxes, perfectly well made with lock and key.

These boxes are sold from 1l. 1s. to 12l. 12s. according to the number of Colours, the beauty of the boxes and bottles, and various other articles they may contain.

Bottles of Colours are also sold separately.

Orders are executed upon the most moderate terms, either in town, country, or foreign parts. The most scrupulous attention is paid to send none but the most perfect articles, and well packed.

Besides the Colours that have been men-

tioned, we have collected in our Manufactory every article relative to Painting and Drawing: viz. Drawing Paper, Ivory Sheets for Miniature, Hair Pencils, Brushes, Chalks and Crayons of every kind, Indian Ink of the first quality, Mouth Glue, &c. &c.

In our Gallery may be seen a Collection of Paintings of great Masters, valuable Engravings, both Ancient and Modern, and principally of English Masters.

WATER

WATER

TO PRESERVE AND WHITEN THE SKIN.

THIS Water having no relation to Colours, we did not think proper to speak of it in the course of our Work. Long experience has proved its efficacy—it repairs the injuries occasioned by the air, the fire, and the sun; it nourishes, whitens, and preserves the Skin from chapping, and in some measure renews the natural colour, that is frequently destroyed in the prime of youth by the various Cosmeticks too often made use of by the Ladies.

Nothing prejudicial is mixed with this soft and unctuous Water; its effects are quick, and it is not expensive.

Those Ladies who make use of WHITE and RED must be particularly careful to wash their faces with this Water, every night after taking off the ARTIFICIAL COLOUR, and every morning before they apply any.

This Water whitens and softens the skin. Ladies may be supplied with it from our Manufactory, and also with directions how to use it.

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ALPHABETICAL INDEX.

Indian

FINIS